

## EDUCATION IN BUILDING. By Professor W. R. LETHABY.

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I WANT my title to suggest something of what we usually mean by architecture, and more, the whole range of activities associated in the art of building. Our current use of the word Architecture is, I must say, likely to be very ambiguous and betraying to the user: it means anything and nothing, according to the verbal needs of the moment. It is Architecture, "the Queen of the Arts," the great drama of men's work, when building, sculpture, and painting are associated together for noble purpose. It means a yearly output of somewhat unreal drawings which are solemnly written about every year under the heading "Architecture at the Royal Academy." It means the current work of a body of professional men called by ourselves architects, all nice and good men, but not necessarily very masterly. Attempts are frequently made to give the word a definition, but it is essentially one of the class of words that has suffered by shifting its meaning, and decay; it is almost one of the words which folklorists might treat of as a myth-making word. There is, of course, a well-known tendency to take comfort in grandiloquent words—the comfort that the lady had in hearing the sermon which contained the "blessed word Mesopotamia"; the ease of conscience provided by another blessed word, "science"—for the man who skins live rabbits is a case in point; and the words civilisation and progress are equally valuable, and "liberty, what crimes have been committed in its name!"

The word "architect" is very infrequently found in the Middle Ages, and then only as a loan word from the Latin, meaning "Master" in building craft, master-mason, or master-carpenter. In the best authenticated instance known to me of the middle of the fourteenth century, it is a master-carpenter who is called architect; Duncange cites the case of a smith.

The use of the word architecture is just as infrequent: it is used in Higden's *Polychronicon* of the maze or Rosamond's Bower at Woodstock. The words in use for architecture were carpentry, masonry, the art of masonry, mason-craft, but above all *work*. As each new effort was made at castle or cathedral, it became "the work." Wills for centuries bequeathed sums to the old or new work of St. Paul's, the work of London Bridge. The great royal palace of Paris obtained its name L'Ouvre in this way, I believe. An extract in Godefroi's *Dictionary of Ancient French* tells how Charles V., showing off his proud new castle, took his visitors to see the masonry.

Everything is known in France and Germany of the manner of production of their mediaeval buildings. We here in England even know that Reims and Amiens and the Sainte-Chapelle were the work of men who called themselves masons. We know the wages they received while they worked, and we can visit their tombs. But there is a curious reserve here

in England about the "architects" of our English cathedrals, and no general attempt has been made to make known the facts as to *our* Pisanos and Arnolfo, *our* Luzarches and Montereaus, *our* Steinbachs. Although the facts lie ready at hand for any investigators, vague theories still hold the field. We go on repeating that it is unknown who built the wonders of mediaeval art, or that they were the work of monks, or of travelling freemasons, or of a cosmati guild, or they were designed by clerks like Elyas of Dereham, Edward of Westminister, or William of Wykeham.

The main facts in regard to England are roughly these. Carpenters, masons, smiths, glaziers, &c., existed in separate or general crafts. In the twelfth century and earlier carpenters were usually spoken of before masons, but this order tends, I think, to be reversed in the thirteenth century. These crafts organised the education of the body as a whole, especially seeing to the apprenticeship, which, while placing a youth with a given master, did it under the sanction of the guild in general and even the community. Practically, in London to be entered as an apprentice was to be apprenticed to city life; freedom of the craft and freedom of citizenship were taken up together, and the mason's or carpenter's boy passing through his seven years' course satisfactorily was received into his guild as a master. Master was a definite degree in craftsmanship, granted exactly like Mastership at the University to apprentices in letters. Indeed, Mr. Rashdall's interesting book on the Universities shows that the Colleges were practically guilds of teachers and learners organised from within on the craft-guild system. This was the great fact of the Middle Ages—the country was subject to the castles and the barons, but the towns organised themselves on a craft-guild basis. At the end of the thirteenth century, in Italy, in Belgium, and to some degree in England, there was a great struggle between the two. Just what the Arti were in Florence, and the Guilds in Bruges, so were the organised crafts in London. Industry then was organised by groups and faculties on what we may call a collegiate pattern: a master mason or master baker stood with the master of letters or of physic—his furred robe, and, I think, distinct cap, marked his mastership in his craft, exactly as gown and hood did that of the clerk or the physician. Our word Mr. to this day does not mean employer, but graduate of guild; however, the two meanings came together, as only a master might be an employer. The real explanation of mediaeval art is to be found in the fact that craft industry through its organised guilds claimed and won an honourable place in life. The craftsman prided himself on his city, his guild, his shop, and his tools, as the knight prided himself on his order, his castle, and his sword. The workmen even set themselves to gain grants of arms for their guilds, and had these arms engraved on their own tombs. We can hardly realise, any of us, the airs the craftsman of London gave himself: he was part owner of the city, a city which had an undercurrent ideal to make itself a free republic on the Italian model. He would have no lord's man in his guilds, and his instinct set him against all handling of goods for profit and brokerage.

If to-day we want to build a shed we call in a carpenter, if we want a garden wall we employ a mason; so of old the employer obtained the services of a master in the chief craft involved in any given work. Carpenters, I think, tended to lead in houses, masons in churches.

The employer had of course a considerable say in the matter, and some abbots and barons doubtless very closely laid down the lines of their abbeys and castles: there seems every probability that Richard I. schemed Chateau Gaillard. In works of great importance like a cathedral or a royal work, an agent might be appointed to represent the employer as keeper or co-keeper of the works; such was Wykeham at Windsor. When such a work or a cathedral was going forward a resident master mason or carpenter was employed as architect to do the work. Designing was merely contrivance, the doing of work in an

ordinary way, just like cooking. The title Abbey Mason at Westminster continued till the nineteenth century, when it was changed to Clerk of Works. It is quite possible that there has been an unbroken succession of masons from the time when Henry III. began his work.

Royal establishments were organised on a self-contained basis, and the chiefs of departments were the royal officers appointed by patent; as to-day we have the king's physician, so in old days there was the king's baker, the king's tailor, the king's mason, the king's carpenter, and the king's smith. Pierre de Montreuil was king's mason to St. Louis, and as such built the Sainte-Chapelle.

I speak of normal conditions; of course, cases might be found where some mason recognised as a great master could not be attracted to a new work, but would advise by consultation and by means of rough patterns, while the resident mason would work under his advice. It is often implied that there must have been some co-ordinating authority, or the carpenter would have put the roof upside down; but the reply to this is that the carpenter did not wish to put the roof upside down, and that the employer would have dismissed him if he had. Moreover, the chief master employed, like an officer to-day, had a general consulting leadership. "I thought instead of vaulting this, sir," the mason would say, "we'd get Bob to put in couples"—that was how the old work was done; there was no art nonsense about when work was *The Work*. Hence of course comes the vital interest of old builded work: it was a true evolution, and as natural as a honey-comb or a bird's-nest. The thought was close to the act; design was no exercise, no application of a theory—it was just doing work "as it ought to be done according to the craft of masonry."

In France, I have said, everything is known of their great artists. In the standard book on the national architects we can trace the development of the master masons from such early men as Pierre de Corby and Libergier at Reims, to Jean Texier of Chartres and the great Martin Cambiche, and still later to men like Philibert de l'Orme. This Texier or Jehan de Beaucé wrote an inscription on his tower, making it say, "I was of wood and lead, but the Chapter ordered my remaking in stone by *Jehan de Beaucé, Mason, who did it; God pardon him and his employers,*" 1506. Then on high, blessing the great corn-plain, this mason set a colossal statue of Christ signed by his own name, and doubtless the work of his own hand.

A delightful story is told of the rebuilding of Nantes Cathedral early in the sixteenth century. There was a consultation, and one old master mason turned up riding a rough pony, his legs bound round with hay-rope, and gave it as his opinion that the work should be after the manner of the country, and that he was the man to do it. Even in the seventeenth century Thevet put the portrait of one mason amongst his collection of the great men of France. And at Reims to-day Master Hugh, who built St. Nicaise, is celebrated in the name Rue Libergier. It is a disgrace to our scholarship and interest in our own things that not one name of an old English master painter, sculptor, goldsmith, glass painter, or mason is to be found in the vast new *Dictionary of National Biography*. Enormous masses of fabric rolls have hardly even been looked over; certainly few have made any critical use of them since the death of Professor Willis, but they preserve a record of our national arts and artists.

The Rolls of Westminster have especially interested me, because they at once deal with our greatest work of art, and, as the Abbey was a royal building, give the names of the king's masons, carpenters, sculptors, painters, and smiths. I have prepared an account of the building of Westminster Abbey from these and published sources, which time and strength have not so far permitted me to publish; perhaps you will allow me to glance at some of the results without any apparatus of reference.

I find the term master mason in general use in the twelfth century; it implies the existence at that time of an organised guild which defined what a master was.

In 1244 William de Haverhill, the king's treasurer, and Edward of Westminster were keepers for the new works at Westminster Abbey. In this year there was a mandate from the king that the Sheriff of York should go and see how York Castle might be fortified, along with Simon the carpenter and Henry the mason, "whom the king sends with other experienced persons." Now the king's carpenter in charge of the works at Windsor in this same year was a Master Simon. Henry the mason may have been associated with him there, he almost certainly became the first master—the architect—of Westminster Abbey, the actual work of which began on July the 6th, 1245. In this same year the Constable of the Tower was ordered to deliver materials to the "master of the works" at Westminster and to Edward. This master of the works mentioned with Edward must be the master mason, and in 1246 we find that Master Henry, *Cementarius*, acquired two houses in Westminster. An account which has never been printed for the work in 1249, headed "Receipts for the fabric of the Church of St. Peter, Westminster, XXXIII year of King Henry, fourth year from the commencement of the Works," names Sir Edward the Clerk and Magister Henry, *Cementarius*, together as keepers of the work. Certainly they represented severally the finances and the art of masonry: this dual control we shall find was customary.

In the same account Master Henry answers for the receipt of £60, and Master Albericus received £45 for task work (that is, piecework) on the Cloister. In an account of the next year it appears that Master Alexander received £106 for timber: and from the frequency with which he is mentioned there cannot be a doubt that he was the architect-carpenter of the first work, working with Master Henry the mason.

In 1250 the King commanded that 600 or 800 men should work at the church. And the next year a mandate was addressed to "Henry, master of the works," to expedite the marble work. In 1253 the roof was being timbered, and Master Henry's name occurs on a roll of this year. Alberic is also mentioned in this year, so that we may conclude he had wrought at the church from its foundation.

Master Henry was to be succeeded by John of Gloucester. In 1254 he is rewarded for his services to the king at Gloucester, Woodstock, and Westminster, and in the same year the King concedes to Master John of Gloucester his mason all tolls for life. That he was in charge of the Westminster works at this time is shown by another mandate regarding it addressed to John the king's mason. Although we know much more of Master John and of his successor than we do of Master Henry, the character of the work had been definitely laid by the first master in the first ten years, and much had been completed, and we must call Master Henry the Mason the architect of the church.

In 1255 John of Gloucester, mason, lent some freestone from the Abbey stores to the Dean of St. Martin's-le-Grand. A mandate as to timber was addressed to Edward of Westminster (the clerk) and Master John of Gloucester, *Cementarius Regis*, who was also ordered to see to some defects at the Tower of London. Moreover, five casks of wine were to be returned to him which the king took at Oxford—a fascinating glimpse this of the king drinking the mason's wine: we have seen that John had been engaged at Woodstock.

In 1256 it was ordered that the works should be overlooked and expedited by John the king's mason and Alexander the king's carpenter. The rolls of this time show that John and Alexander received furred robes of office twice a year. In the same year the same mason and carpenter bought marble in Purbeck, and are called keepers of the work.

In 1258 the remainder of the tiles in the Chapter House is mentioned, and this is very interesting as dating those beautiful works so early. The same year the superior and sacrist

of the church are commanded to take down the old church as far as the "vestry by the king's seat," so that it may be rebuilt as the work begun requires. This can only refer to the bays west of the crossing, and is especially interesting as confirming Mr. Micklithwaite as to the date of this portion and as giving us the part we may especially assign to John of Gloucester.

The king would, of course, consult his official mason and carpenter, who at this time must have had easier access to him than almost anyone, on most of the royal works in the country. In 1256 the gateway at Guildford Castle, which still stands in Quarry Street, was wrought "by the view and counsel of Master John of Gloucester our mason and Master Alexander our carpenter"—an ideal firm of architects. About the same time the chapel at Woodstock was paved "by the advice of Master John of Gloucester." In 1260 the wages of the mason and carpenter were doubled when travelling to make provision for the church. John of Gloucester's premises at Westminster, consisting of "a house and curtilage," are mentioned in 1256, and in 1258 the king rewarded him with a gift of houses. His wife was Alice, his son was Edward. In 1260 the great mason died: he evidently left a good memory, as his son is called "Edward, son of John the Mason," in 1266.

Master Robert of Beverley, who succeeded John as the third master of Henry the Third's work at Westminster, was evidently as great a man as his predecessor. His name occurs amongst the list of masons working at the church in the roll for 1259. In a printed Issue Roll of this date particulars are set out of several "petty works" at the palace, like cutting away for altering the king's chimney. Robert of Beverley appears here as receiving 3s. a week wages, while ordinary cutters and bedders were paid 2s. 2d. He seems to have been associated with John the Mason before John's death, for a mandate of about 1259 is addressed to John of Gloucester, Edward of Westminster, and Robert of Beverley, "our masons and wardens of our works." After the death of John there was probably an interruption in the works, for the king was passing through a time of great stress. In 1263 Master Robert of Beverley, the king's mason, and Master Odo, the king's carpenter, were engaged in repairing the palace after a fire, but there is no mention of works at the church till 1267, when what the king himself used to call "the late unhappy troubles" were nearing settlement.

About this time John of St. Albans, the king's sculptor, is mentioned: in him we probably have the artist who wrought the exquisite Annunciation of the Chapter House and the censing angels of the transepts.

A roll of accounts of this year opens with the statement that it was guaranteed by Master Robert de Beverley, mason, and Brother Ralph the convert (evidently some Jew clerk), who had been put in place of Alexander the Carpenter and John of Spalding (also a clerk, most probably), by the king's writ directed to Adam de Stretton, warden of the said works.

This is the last mention I have found of Alexander. In 1260, Master Alexander the Carpenter is mentioned in connection with property at Knightsbridge, where he may have had his yard. Other accounts from 1269 to 1272 mention Robert the Mason: one of them is made up to November, before the king was buried, by Master Robert de Beverley, mason, and by view of Adam de Stretton, clerk of the exchequer. This account includes some glazing and paving, and as the church was dedicated in 1269, and there are no further accounts of the early series, we must suppose that it was then practically complete to the entry of the Quire, half way down the west limb.

Robert was employed in erecting the stage for the coronation of Edward I., into whose service he passed. The Issue Roll notes a payment to Master Robert of Beverley, the king's mason, of 6d. a day, which he was to receive for life by command of Henry III.

Edward's great work was the completion of the Tower of London, and in 1274 Robert was keeper of works at the Tower. From a deed of the next year we gather that his wife's

name was Cecilia. In 1276 he was paid as keeper of the king's works for materials for the royal mews at Charing.

In January 1278 the king issued a mandamus for an inquisition "before Giles de Audenard and Master Robert de Beverley, the king's mason, and the aldermen of the City," as to whether any damage would arise if a part of the City Wall near Ludgate was pulled down and a new strong wall was built by Fleet Ditch. This was done to provide room for the Blackfriars Church, and it is probable that, as the king and queen were chief benefactors to this church, Robert, the most famous master of his time, may have appeared on the board as architect to the friary, and the beautiful fragment found and destroyed last year may have been wrought under his direction.

About this time the records show an annual expenditure of one and two thousand marks a year at the Tower. In 1278 the accounts of the king's clerk, Giles de Audenard, were audited by the view and testimony of Master Robert de Beverley and Brother John of St. Thomas of Acre, masters of the king's works at the Tower, Westminster, and the Mews. In 1279 Master Robert was still keeper of the king's works. Robert the Mason was evidently a great favourite of Edward I., who granted him 12*l.* a day when staying in London and 16*l.* when journeying. On another occasion the king sent him a tun of wine as a gift. Robert was succeeded by Richard Crundale as king's mason. Extensive works at the Palace in 1288 were under his charge, and after the death of Queen Alienor he built her tomb in the Abbey and also Charing Cross. Richard died in 1294 before the Cross was finished, and it was carried on by his brother Roger.

The second Alienor Cross in London was the work of Master Michael of Canterbury, king's mason, who also entered on the work at St. Stephen's Chapel in 1292.

At this same time Richard Witham was working on the crosses, and in 1307 Master Richard Witham, mason, was assigned to direct the works at the king's palace and the Tower at wages of 7*s.* a week. In 1322 we meet with the name of Master Walter of Canterbury as king's mason at the palace and Tower: he was assisted and succeeded by Master Thomas of Canterbury, king's mason and master of works, St. Stephen's Chapel. In 1326 a William de Ramsey was working as a mason on the royal works. He was to become the next great London master. He built the beautiful octagonal Chapter House of St. Paul's, begun in 1332, and in 1338 William de Ramsey, king's mason, was appointed "chief mason at the Tower and chief surveyor of all the king's works." In 1339 St. Stephen's Chapel was under the ordination of William de Ramsey, master mason to the king: he is probably the William de Ramsey who in 1347 represented Aldersgate Ward on the Common Council of London. In 1348 William de Ramsey was still master of masons' work at the King's Chapel.

I have here made a summary abstract of my notes in regard to the king's masons engaged on Westminster works for a century and up to the time of the Black Death. After this time I will only give a list of names carrying us on to the building of Henry VII.'s Chapel and the break-up of the old indigenous art. Some day I shall hope to publish a fuller account of the building of the Abbey Church, the king's masons, and mediæval art in London. The names in sequence after 1350 are John Box, Thomas of Gloucester, Henry Yevele, a very famous mason, William Colchester, Thomas Mapilton, Thirsk, William Turnor, Robert Virtue, Robert Jenins, and John Lebons. After the great change, the office of king's mason was carried on by such men as Nicholas Stone, and as a sinecure office lingered on to the eighteenth century.

In seeking for collateral evidence I have gone over what is published on half a dozen cathedrals, and I have no doubt that in a few years their several parts will be assigned to the several masters who built them, with great approach to certainty.

As the story is for mediaeval art, so very similar (evidence makes known to us in several building accounts) were Greek building customs.

The sculptor and the mason seem to have been interchangeable, and the architect was a directing foreman receiving double the wages of his workmen. The system which led up to the great outburst of the Periclean age seems to have been that by which a number of little masters employed each a few men in producing tombs and such like, and in working at a temple as occasion offered. In Persia and India, in Constantinople and Italy, the method was practically the same: everywhere the art of building was developed by the continuous experiments of practical masons and carpenters.

It is impossible to bring back this state of things—it may be that it is not even a desirable state of things—but it is necessary to recognise that this evolution of masterly building is what we mean by the words Ancient Architecture.

Men in society are always developing something; we cannot escape it. On the basis of the good sound building customs of the masons, the drawing masters of the Renaissance developed the scholarly archaeology of Roman forms, then of Greek forms. Pugin and his followers later developed the simulation of Gothic forms. Then as we got further and further away from building there was an enthusiastic evolution of perspective drawing, and an eminent man gave as his formula of salvation the words "Sketch, sketch, sketch." We have even had quite recently an evolution of "architectural printing" as it is called, and these last two, together with the growth of a vast number of patent processes in building and increased complexity in the professional side of an architect's work, seem to be the most marked phenomena of what we call Modern Architecture. The result is, as virility and reality go out of buildings, they are more and more slimed over with a garbage of diseased ornamentation, and more and more break out into a fatty luxury. If a name be required for all this I would suggest the "Syndicate Style."

In the study of past art which has been so minutely made by antiquaries it was necessary that emphasis should be laid on the *differentia* of the several phases as they succeed one another. These characteristics, mannerisms, and limitations were then called styles; but in a far larger way there has only been one style of architecture from the foundation of the first hut for the living and the heaping of the first cairn over the dead. This has been the art of experiment, the art of reasoning on given data, the art of impressing on work the evidence of thought, care, mastery, nobility of purpose; and these things are ever the measure of the worth of any so-called style, and ever will be. They are the measure of the value of our work to-day.

Now considering the future and the present in the light of the past—what is there left for us to do? Shall we aim at reviving the forms of some yet untouched style—the styles of Mycene and of Mexico, for instance? Or shall we urge the return to some position which we might call safe and sure, such as copying the methods and mannerisms of Wren? A moment's consideration will show that we can do none of these things. A man here and there might take up such a lost cause to his own satisfaction, but it is foredoomed to sterility; the attempt can only be made by an artistic ostrich who *won't* consider the essential conditions of the problem. It used to be so ingrained into men that architecture was copying of curious shapes for which they could give no rational account that Keepe, who published an account of the Abbey in 1680, says it was built *in imitation* of the Gothic manner of building. But we are past that now, and to attempt to turn back to a system of copying we need faith in a revealed style as Palladio had: "Verily," he says, "it is a discommendable thing that we, who have a true faith, should build in any other than the true antique way." It cannot be! What (in New Testament phrase) we are "shut up to" is to turn to a study of the art of building, in the practical work of to-day, in scientific weighing and testing, in observing the

stored experience of the past. Archaeology is a very amusing study, but in its present form it is only a branch of history.

*Proportion.*—Nobody knows anything more about this than that work done with a large reasonableness and fitted exactly to its purpose looks well: nothing is better proportioned than a North-Western engine, to its driver; or a piece of good plumbing, to a plumber.

*Taste and Principles in Design.*—No two are agreed on these: one eminent modern architect used to thank God publicly that he had never used an iron beam; another eminent architect used to propound that modern architecture would be born of iron and glass.

*Beauty*—that subtle and elusive essence which speaks to our spirits through man, nature, and man's work—no general reasoning can be based on *it*, save so far as a man may try to explain what moves and touches him. In art it is the evidence of a balance of qualities put into man's work parallel to purity, nobility, love, skill, courage, in other phases of his life. Work certainly is a serious part of life: beauty is the index of its quality; beauty is the smile of energy. It is work, the *effort* we have to teach; not the smile, that must come and will come of itself under healthy conditions. Again I say, we are "shut up" to the study of building: nothing healthily new, or truly wise and beautiful, can spring in architecture save from this groundwork. It is sometimes said that we know too much. If we were only ignorant there would be hope; but instead of this blankness of ignorance I think it would be better to have a fulness of knowledge which deliberately went its own way.

*How far should this study of building go?* The whole way; or a first step; all is good. To give up all and carry the hod, that would be the part of the saint in architecture: for no style can ever be fine in the highest sense which is not alive and intelligent right down through. The Gothic abbeys were built with Gothic mortar and with Gothic hammer strokes. But the least way will help—our mere aspect toward an old building, interest in the bedding, the stones of it, and in the way the eaves finish at the gables; or again, a little more stringent criticism of our paper designs from the point of view of reasonableness; the sacrifice of some vain and vapid ornament; all these are so far good.

*How can this study of building be done?* In any way and every way. By spending more time at work and less in the office: this especially can be done even now, and profitably, in the middle period, when one is setting up in practice.

Some friends of mine, to their great pleasure and pride, have acted in this way as resident architects, and, assisted by a foreman, have seen work through from top to bottom. Digging fresh earth with the scent of new cut wood in the air, cutting about in carts, interviewing sawyers, and watching the cement set, is certainly more healthy and romantic than drawing in an office. We might vary Stephenson's dictum on boats, and ask, "Who would work in an office when he can fool about on a building?" We may learn much about building by mixing with and questioning the men, who still hand on amongst themselves ancient traditions. One man will have seen stone axed in Gloucestershire when he was a boy; another will know how to lay pan-tiles in hay: a plasterer will recommend washing his finished ceiling with two coats of skinned milk, or putting tallow in whitewash to make it bind; another, when you are troubled by hearth-stones cracking, will remember that they used to bed them in fireclay; another knows exactly how an old brick oven was built, or a water tank 15 feet in diameter domed without centering. We are living through a period of quick change in these things, and probably the most valuable work that could be done would be to gather together such old recipes and all the folk-lore of building. In Devonshire many ancient words survive; such as the *durns* of a door, a *planchen* floor, *heling* slates; and in the North they still fly a flag when the roof tree of the humblest jerry-built cottage is set up with rejoicing.

These rough, tired men that sometimes irritate us, the "so-called British Workmen," are

after all the true artists in building, the representatives of the mediæval architects, and it is absolutely necessary that some relations and community of interests should be established with them once more. As it is, I never go on a building which I call my own but I want to beg their pardon for my vulgarity, pretentiousness, and ignorance. It is they and they only who sufficiently know what stones are sound and set on their right bed; what cement works properly under the trowel; whether every tile in the roof has two nails, and so on.

The offices of the several organised trades are quite the best centres to get valuable and largely disinterested advice as to local materials and labour. These unions, in a much narrowed form, represent the old guilds, and I feel certain that any real improvement in practical building will be accompanied by these unions assuming more and more the functions of the old guilds. They will see that even for their present prime purpose of keeping up wages other things are necessary than the crude war of strikes.

The transformation of the existing builder into a contracting agent, and the consequent almost entire failure of the last remnants of the apprentice system, must tend to put the teaching of the several crafts into the hands of the men themselves. By means of schools, and a system of apprenticeship to the guilds, masons will again see to the training of masons, carpenters of carpenters, and plasterers of plasterers. Even at this moment the plasterers of London are trying to make it an obligation that all learners in their trade shall pass through such technical classes in plastering as already exist: if this point is gained men will not ultimately be accepted by their fellows as qualified unless they have gone through such an apprenticeship course; thus we shall get back to a definition of "mastership" in the crafts once more. If an interaction between organised trades and public technical schools could be generally set up we should get back near to the mediæval theory by which a boy was practically apprenticed to his guild and the corporation of his town.

The quality of workmanship rests in the long run on an economic basis: the thought and energies of the workers are now so exhausted by the wages war that they have only heart and strength left for routine labour. It is always so.

The art of Japan was the work of craft artists retained by the great families: Feudalism, if you like, but still reward and joy in life to the craftsman. The art of the monasteries was the flowing out in illuminated books, illuminated glass, illuminated wall surfaces, of the security and discipline of the cloister: Religion, if you like, but still peace in work. The art of Florence, Bruges, Paris, London, in the thirteenth century, was the art of cities in which the organised crafts had assumed the command: a mere detail of civil government, if you like, but to the workers pride and reward in the work of their hands.

It is said that the breeze of art blows where it listeth; here you will find it with absolute slavery; there, with a formal tyranny; here again, as at Florence and Bruges, with a sort of communism. Where is the common principle? There is none common in the *names* certainly, but where labour is honoured there art will certainly be found, for honourable labour *is* art, and that proposition must stand. We must draw near to the workmen by every means in our power. I have often wondered if it would be possible for the men at a given work to elect a spokesman who should have right of access to the architect, and the drawings. It would never do, the builder might say, for "one of my own men" to report in this way; but the answer is that the work, not the agent, pays the worker.

Again, we must learn about building in schools—schools of practice and theory, experiment and research. Building schools exist in several continental cities, and it seems to me that such schools, as representing a very large and important industry in big towns, should be established or assisted out of public funds. In a big London institution I should like to see all the building crafts carried on side by side, where experiments might be made in brick-

arching, stone-cutting, timber-framing, and so on, with due supply of apparatus and testing-plant.

Here also the mechanics of construction should be taught mechanically and demonstrated in models. May I say here for myself how much I wish somebody would write a book (less dry and abstract than such books always are) dealing with constructive results in a large way addressed to common reasoning processes. There is an extremely interesting essay of this sort by Wren in *Parentalia*, and some of Viollet-le-Duc's and Choisy's remarks on ancient construction show the same grasp of essentials. Then I would have planning and normal arrangements for given purposes taught. Even taste, the objecting *negative* taste of a good critic, might be allowed, but not a word on "art," and "design," and the styles, in the usual acceptance of those words. In such a school we might hope to bring together the different craftsmen, builders and architects, all studying together the true art of building and evolving a reasonable architecture.

The question of education in building to be solved must reach all classes of men engaged in building, and it must set itself to improve all the mass of building done in England. If we are to claim public help, I feel that we should get rid of visionary ideals and sectarian narrowness, and stand to gain with the common gain. It would have been well if we could have been ready with a scheme in which all might join a dozen years ago, when Technical Education was first being practically dealt with; but I fear unless we are less vague in our aims nothing will be done for a further dozen years, and that I feel would be a calamity. But some day, pleasant, natural, living architecture, will be refounded on common building—it can stand on nothing else.

#### DISCUSSION OF MR. LETHABY'S PAPER.

The President, Mr. WILLIAM EMERSON, in the Chair.

MR. PAUL WATERHOUSE, M.A. [F.], in moving a vote of thanks to Professor Lethaby for his very interesting Paper, said that the title, "Education in Building" had caused some anxiety. Fears and doubts had been expressed as to whether it was to deal with the education of the young, or the education of the aged, or the education of the middle-aged. They found that all their fears had been realised. The lesson had been meant for all, and he hoped they would all benefit by it. He confessed that when he saw a man of intelligence and learning approaching the Middle Ages he always trembled lest the veil which hangs over them should be about to be removed. That evening, although they had learned much, he was glad to find that some mystery still remained. Professor Lethaby had insisted once more upon the importance of the Guild system in the Middle Ages, and had shown them, by examples to which probably none of them had had access before, how consistent and successful that system was. Professor Lethaby might, of course, have carried his argument further and established the existence of guilds from a much earlier date and down to a much later one. The architect had been dispossessed altogether, as he had been dispossessed before, but still the ques-

tion was partly unanswered. There still seemed a doubt as to who designed the great buildings of the Middle Ages. Of the existence of superintendents under various names there was ample evidence; but to superintend was one thing, to design another; and once more they were brought face to face with the conclusion that the buildings of the Middle Ages, whatever might be thought to the contrary, somehow or other conducted themselves. That is to say, when they found a succession of generations of men working away at a building like Westminster Abbey, they realised once more from the evidences brought before them that evening that some Divine Providence, one might almost call it, designed that building, and that man throughout that enterprise, as throughout the Middle Ages, was much more of an instrument than of an author of architecture. That, in fact, was the conclusion to which Professor Lethaby would bring them; and he brought out the great contrast between the architect of to-day and the architect of the Middle Ages. He brought that out so strongly that they must feel that it was impossible for them to revive, even with the help of the trades unions—which help at the present moment seemed hardly likely to take a direction they could wish—the

successful conditions of the Middle Ages. The great contrast between the architect of to-day and the "non-existent" architect of the Middle Ages was that they of the present day were, or imagined themselves, faced by the necessities of copious invention. He was delighted with one phrase of Professor Lethaby's—viz. his definition of mediæval designing as a mere "contrivance." No doubt that was the true answer to the problem. The designing of to-day might be, as was the designing of the Middle Ages, simply a question of able contrivance. All the same, it seemed impossible for them at this period of history to neglect the past as a preliminary study in architecture. In fact, he was sure that Professor Lethaby did not mean them to take the view that the past could be disregarded. It might be the duty of an architect to reject the traditions of the past, to be as far as possible from the Palladian position; but it could only be his duty to do that when he had learnt all the Law and the Prophets; and when he had mastered all the Law and the Prophets he could throw them over and go on in his own way. But the Law and the Prophets had done a good deal for him in the meantime; they had, in fact, made him fit to throw them over. The Bible had been referred to that evening, and in this connection he would make one more allusion to it. Not in our version, but in the Vulgate and in the Greek, the word "architect" had been applied metaphorically by St. Paul to himself. "As a wise architect," he says, "I laid the foundation." At all events, there was one period in history at which it was realised that to a person known as the architect belonged the function of directing foundations. If the Guild system ignored the existence of architects, and if it was to be regarded as prevailing in Periclean Athens as well as in the Monastic Middle Ages: if further, as other writers hold, it was represented in Rome by the *Collegia*, how came the very word *architectus* to have an existence? He should like to make one more remark with regard to a form of contract which he found some years ago in an interesting and little-known book by Thomas Gardner—"The History of the Submerged Town of Dunwich on the East Coast." In that book would be found a most interesting transcript of the contract for building the tower of Walberswick Church. That tower was built by two men, engaged much in the same way that Professor Lethaby had described. They were paid in kind—as a matter of fact, with fish, and they were given a coat a year so long as they were "good men." That was the wording of the contract. But if one read the contract carefully one realised how extremely simple was the problem laid before those men. They were simply bound down to do a certain number of things in the building of that tower, most of which were to be more or less imitative of other buildings in the

neighbourhood. It taught one once more the lesson, that whatever they did in the Middle Ages to produce such successful results, and however they set about it, a striving for originality was not their aim.

PROFESSOR BERESFORD PITE [F.] said he had much pleasure in seconding the vote of thanks to his colleague Professor Lethaby, which had been moved by Mr. Waterhouse so ably and with such tact and feeling. They had had a very extraordinary Paper, a Paper which he imagined none of them were quite able to forecast, and at times they did not quite know into what conclusions they were being skilfully driven by the series of ascertained and proved facts with regard to the processes of mediæval building which had been so thoroughly laid before them. That mediæval architecture evolved itself step by step was a fairly self-evident proposition, and he must join issue with Mr. Waterhouse, as he did not find room in its ordinary or ordinately development for, at all events, the office of the architect as known and trained nowadays. One could not imagine the coming into the scheme of Westminster of a man with a fine idea of what a cathedral ought to be—with an original idea: with an idea based on anything outside of the narrow limit—the groove, the sort of fixed rail of development in which national architecture—(perhaps he ought not to say "national architecture" but Western European architecture)—was moving. The development invariably seemed to proceed from impulse, a constant impulse, and an impulse that existed unchecked until the time of the Black Death. To him there did seem to be a halt in that impulse in Westminster—viz. when they found the process of development arrested in the western end of the nave—arrested in a singular way, and in a way one would think a singular testimony to the recognised beauty of the eastern end, which was already accomplished. The development was arrested and the previous work was copied, or very nearly copied. It was carried on to completion in the same style, in the same proportions, and in the same order. There were exceptions to this view of mediæval art, and the exceptions were very extraordinary and noticeable. They were exceptions which certainly brought before us the originating and directing mind—a mind not thinking in the mediæval groove, but a mind that thought for itself, and which was burdened with that originality from which they all suffered in this unhappy new century. He was thinking of such a work as the west front of Salisbury Cathedral, of such an effort as the west front of Peterborough Cathedral. Looking at those, we feel that we are altogether out of the tide of development, and that a new element has come upon the scene. The poetic thinker deals with the material which is at hand, and he arranges it by

certain original methods. As we think about this, and seek to understand how it was arrived at, we get back to Romanesque types of abbey churches in England, where undoubtedly originality of intention was manifested. Take, for instance, the west front of Lincoln, with its three great arches, which, he thought, suggested the three great arches of Peterborough, and with the great flanking mass of arcaded walling around and above, which might have suggested the flat arcaded walls at Salisbury; at Wells also to a certain extent we find this poetic imaginative element at work. It seemed to be introduced from outside. These cases seemed to be exceptional and to step aside from the regular development of mediæval building as such. All this takes us on interestingly to the Renaissance, when a new world was dug out of the world that then was, and the world of antique art lay discovered. He did not know if one dare call them master-masons or master-carpenters, but in the artists of that day we are face to face with thinkers of the calibre of Alberti and Bramante and the school of masters of the Art which included painting, sculpture, and architecture under the simple term, and we find them developing from Roman remains a delightful and an interesting art on an entirely new basis. That they employed to the greatest possible advantage all the resources of perfect masonry, all the resources of perfect carpentry and perfect art work that existed, is admitted. But at that point we find the mind of the architect as we now know it—the mind which, without being trained in the handiwork of the crafts with which he dealt, dealt with material as the painter deals with so much paint, or the sculptor with so much marble, and used the new architectural forms which had been discovered, and applied them for the sake of imaginative beauty and effect. That the Renaissance masters worked admirably we need not assert; they have left behind them sound intelligent work, which reveals their delight in their profession, in their opportunities, in their buildings, and in sense of the glory of the age in which they lived; and we understand it, see it, and feel it. Time moves on, and we find the mysterious spirit of Art slackening; the arts become dead, and as the artistic instinct seems to lose power over the architect, somehow it seems to transfer itself to the craftsman. If we look at the eighteenth-century work in England we find that imagination has lapsed to a very great extent; but a perfect school of what we might call domestic building is in our midst, using simple Renaissance forms, and re-using them and re-arranging them in very much the same way as the mediæval architects at an earlier period arranged their mediæval material and method. That again is killed at the end of the eighteenth century by the revivals of Greek—later of Gothic. The Gothic revival

again gradually awakes to the delights and beauties of craftsmanship, and dies leaving these beauties behind without architecture; and here we are to-day still contemplating the problem of the future style which we have contemplated for so many years. Where are we? and for what are we working? How are we to design this building? or that? is a daily questioning. Professor Lethaby's self-abnegating position was a rightful one. It will be a difficult one to accept because it will be a difficult one to work in; but if the doctrine is incontrovertible and if the position is sound, it will sooner or later assert itself, and we cannot afford as a profession to go on raking in the quagmire of the styles. We cannot with self-respect retreat upon the Victorian and develop a new Edwardian. We cannot pick up any of the lost threads of the last century and start again with them. There was even a time when we were threatened with a Japanese revival, just as the last century was threatened with a Chinese revival shortly after the time of Horace Walpole. What indeed was this new century to be threatened with? This brought him (the speaker) to a point upon which it was important to say something—viz. as to the position that we hold as an Institute with regard to education in art. We, of course, could only work with the existing and accepted traditions of the profession, of the body to which we belong. Those traditions continually modified themselves, and reacted upon themselves. Can we afford to perpetuate longer the traditional difference between the Classic and the Gothic school? Can we in our examinations wisely insist upon an accurate knowledge of one style or the other instead of upon merely an accurate knowledge of building art as such? Had the time yet come when we could dispense with the diversity that exists between the art of design and the art of construction, and disabuse our minds of the idea—which unfortunately is a fact—that men who are good in design are bad in construction, and that men who are bad in construction are good in design? If we have not attained to that point Professor Lethaby has been preaching to us in vain, and his Paper would be thrown away. That that point must be arrived at all would admit. It was admitted that the properly qualified architect is the man who is a good constructor and a passable designer, or, it may be, a bad designer and a good constructor. But we cannot be content with this. We must do our best to bring some solid doctrine of architecture into the foundation of our system. He could only hope that Professor Lethaby's Paper might lead to heart-searching in that matter. In the Institute they were in a very curious position. Members would recall the circumstances connected with the memorial which was drawn up some ten or eleven years ago with regard to examinations in architecture, wherein it

was pointed out that to examine in the art of design and to examine in the art of architecture was scarcely possible; at all events, it was not considered to be proper and desirable. The Institute at that time had in its examination programme examinations in design conducted in a different way from that in which they are conducted now. He was glad to say that more consideration had been given to the matter, and more time was allowed to prepare sensible and practical working designs; but the position generally was unchanged. But when the applications of candidates for the Fellowship of the Institute were considered, the policy of the Institute suffered a complete reversal, and the principle was accepted with regard to Fellows that, provided they were good constructors, provided that they were accepted as reputable practitioners, the Institute did not examine them in design, but only in those parts of their professional life and work which affected the good of the country—the benefit of public health and the repute of the profession. The time, he thought, had now come for the sound sanity of that policy to be applied to the Associateship examinations as well as to the admission to Fellowship; and he would like to suggest that a further modification might be arrived at by the Board of Examiners with regard to the examinations in architectural style. Architectural style was altogether worn and played out. We should do ourselves no good by perpetuating it. We might ask for a proper acquaintance with the forms of certain buildings as a matter of examination, and as a matter of examination alone, but we run the risk in doing that of directing the attention of the student to the outside, to the forms and chattels of a building, rather than to the main principles which underlie it. Professor Lethaby's Paper opened up all sorts of possibilities for discussion; he (the speaker) hoped that the seed which had been so carefully prepared for the sowing would bring forth some effective results in our daily practice and in our views of the proper qualifications of architectural education.

MR. LEONARD STOKES [F.] said that he honestly admitted that he was a little confused, but he nevertheless sympathised completely with Professor Lethaby's views; at the same time he could not quite follow them out to a logical conclusion, and he doubted whether Professor Lethaby himself could. The old days were very charming days—when John the mason, having raised the walls of a building, called in Bob the carpenter to consult with him as to whether he should put a stone or a wooden roof on. On that point he joined issue with Professor Lethaby. He did not believe that that sort of thing ever existed. There was some scheme at first that the building should have a vaulted roof, but frequently a mistake was made, and John the mason, before he got

to the top, found that the building would not carry a stone roof. Then he called in his friend Bob the carpenter, and explained that he had made a mess of the job and asked him to put a wooden roof on for him, and Bob assented with pleasure, and did it. But that was not a design, it was a muddle, and there were a number of such muddles all over the country. Did the Professor want them to go back to the old muddling days when the builders began to do something that they wanted to do, and ended by doing something that they did not want to do? Professor Lethaby made out that the architect was woefully ignorant—that he did not know what a piece of timber or a piece of stone could be used for. The Professor talked about setting up technical schools. But the architect should know far more than the ordinary workman what could be done with stone and brick and timber. The architect ought to teach the bricklayer and the mason and the carpenter; but Professor Lethaby wanted the architect to go and learn from those workmen. That was all very well; but the bricklayer, for instance, in nine cases out of ten, was a dunderhead, and made all sorts of silly mistakes. He had known him to spoil the whole design rather than depart from some recognised trade rule. Nevertheless, he (the speaker) sympathised with Professor Lethaby. Honest building was everything, and style, as they bandied it about, was a sort of nightmare that the Professor described very excellently as the "Syndicate Style." The idea was to run up a place to catch the eye, and to let or to sell; but as for being honest work as such, it was not. In conclusion he supported very heartily the vote of thanks to Professor Lethaby. If, as he confessed at first, he was a little confused at some of the propositions laid down in the Paper, he had learned a great deal of useful knowledge from it.

MR. THOMAS BLASHILL [F.] said that one of the comforts they enjoyed in listening to a lecture of this kind was that they might accept all the lecturer's premises without coming to his conclusion. Professor Lethaby's Paper was most instructive in regard to enlarging their information as to what was actually done in the olden times; but as regards the Abbey of Westminster, he was quite unable to believe that that particular building, French in its grand system of design, although it might be English in its details, could have been designed by any Thomas, or John, or Robert of Beverley, or any of the other persons whose names had been mentioned. It was true that they did not know who were the master-minds that carried out the building—but there might be reasons for that. In the olden times there was not that anxiety that there is now on the part of a man to have it known for all time that he himself had done the work. Few people put their names to the work, or apparently even thought of

it. Another reason he would suggest was this: the class of men who worked on those buildings, whether with their hands or as designers, had not, as a rule, any distinctive surname. No doubt, if there was one John of Beverley there were fifty Johns and Roberts of Beverley going about the country. The name was useful on a particular job and amongst a narrow circle of men. Thus, if the great statesmen and warriors of the Middle Ages—the Salisburys, the Beauchamps, the Warwicks, and so on—had had no distinctive name, but instead were John or Robert of So-and-so, how little their names would be known or recorded! If the workmen had had specific names which distinguished them from everybody else, it is more likely that they would have come down to posterity. He thought, again, that we reckoned too much upon what we find in the Renaissance styles. Men like Inigo Jones, for instance, who posed sometimes as joiners and sometimes as architects, we think of because the actual designer was also the workman. He did not think that that was so until a very long time after the Reformation and the destruction of the monasteries—probably for one hundred years. Owing to political changes very few buildings of consequence were erected at all, and the upshot was that when new buildings were required the best of the actual workmen who knew all about the building and were most fitted to take up the work were called in. He did not think they could argue from that that there were no special architects in the Middle Ages. He quite agreed with Professor Lethaby about going to workmen for their actual knowledge. Too little of that was done. There was too much time spent in schools—too much time spent over books. There were too many details forced upon them—too many ways of doing a thing. In olden days they were content with one way of doing a thing; now they had half-a-dozen, and architects were expected to know all of them, and that was a clog and a hindrance. So far he would argue, but he could not argue that Westminster Abbey or any other great building grew up through a combination, however close, and however small and select, of superior workmen. There must have been one master-mind which, from the laying of the lowest courses of stone, had decided and was able, either by drawings or in some other way, to teach the workmen what was to be done from the bottom to the top. If they saw a plan of a French or an English thirteenth-century building of importance, they could tell everything with regard to the principal parts of the structure, from the base to the vaulting ribs which were the cause and object of the base. It could not be done in a haphazard way, and work of that kind could not be carried on by a chance combination of able workmen who changed from time to time.

Mr. SYDNEY VACHER [A.] thanked Profes-

sor Lethaby for the highly interesting information concerning English and other mediæval architects, but expressed disappointment that nothing as to the social status of these grand old builders had been given. He could scarcely believe these men to be mere craftsmen. In illustration, Italian painters were spoken of, with their following of pupils and social status, but then as now it was presumed everyone fancied himself a judge of a picture. As master painters enjoyed an exceptional position, did not architects then enjoy an equal, if not greater, social status? In Italy certainly the works of architects were appreciated, and it required quite as great genius to produce beautiful architecture as to produce pictures good enough to last through ages. A mere knowledge of materials and construction was not enough to produce architecture, any more than a knowledge of paints, the skill in handling them, the capacity to draw correctly, and the memory to reproduce old and modern scenes, were enough to make a great artist. It was the brain of the artist, the genius, that was required so to use the knowledge and material as to produce artistic work. It was acknowledged that whoever was responsible for the design of such a building as Westminster Abbey or St. Sophia, Constantinople, he was no mere craftsman, no ordinary mason or carpenter, but a man who at the present day (and probably in his own day) would be recognised as a highly cultivated genius, admitted into the society of the highest in the land and honoured and trusted by them. The speaker went on to allude to the present day inclination to decorate buildings with scantily draped sculpture after the antique, citing Tietz's new building in Berlin, and advocated the sculptor taking his models from the life and costume around him. He hoped that this might be done in the great monumental work about to be erected in the memory of the late Queen Victoria.

THE PRESIDENT said he was sure that they were very much obliged to Professor Lethaby for the very interesting Paper he had given them. At that late hour he did not wish to add anything to the discussion, but with regard to the point made by Professor Lethaby as to the work being done by a master mason and master craftsman, if he were to go to India he would find the same thing being done there at the present day. About eight years ago he was in India, and, in company with the engineer of the province, visited Gwalior, where the tomb for the late Scindia, the present Scindia's father, was then being built. The work was being done entirely by natives, under a native master. It was an enormous building, and no European had had anything to do with it. On asking to see the drawings the master produced a model of the dome, and said that was all he had to show. He (the President) asked him how he managed about the execution of such elaborate stonework, and he tapped his forehead and said that it was

there. He supposed the great churches of the Middle Ages were built very much as the buildings in the East were at the present moment. The guilds and the masters handed down to their pupils certain rules and forms, and when they had to erect a building of given dimensions they knew exactly what kind of piers to put up and the detail to place above them. The master mason simply arranged the stones out of his head for the under masons to work. He thought, however, that there must have been a person who made some sort of drawings. In Vilars de Honcourt's book they would find drawings showing that, however roughly they were done, some master hand actually guided the plan and the details and the design of the building to be erected. It could not have been the case that the foundations were put in and the piers built by the mere chance of a clever mason thinking what he should do afterwards. There must have been some master mind guiding the whole from the beginning. That system applied in India now, and might have applied in the Middle Ages, but with the requirements of modern life, if they handed over a big city building to a master builder, a bricklayer and a carpenter, the building would hardly answer the requirements of the clients who wanted it, even if it did look more beautiful than the buildings that architects could design.

PROFESSOR LETHABY, in reply, said he did not remember having spoken about building being done in the absence of a scheme. All he said was that building was done by masons and carpenters. He did not mean that each of the 800 men employed acted independently on his own account. Nothing of the sort: they began as apprentices, mixing mortar and so on, and from that they rose and became very great men. It had been said that a mason was a common man,

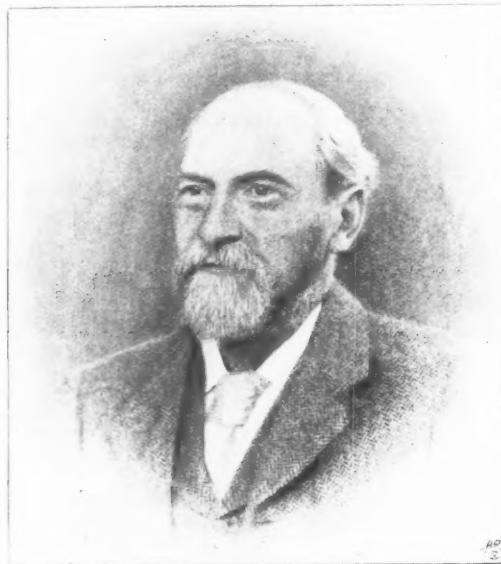
but that was a mere assumption. According to the meaning of the mediæval word, it was possible for a mason to graduate from cleaning the shop and mixing mortar to be the equal of any man in the realm.

Mr. WALTER MILLARD [4.] writes:—

Since listening to Professor Lethaby's Paper I feel more and more moved to ask whether he would not, in his modesty, lead us architects, if he could, to overlook one trifling consideration, viz. that after all the education in building which we can get—and the more we can get the better—there still remains to be cultivated and practised an art in which he himself is so justly recognised as a master, the art of architecture; that something more than—something above and beyond—the art of mere building; that gift to man of expression in terms of building; that exercise of human power to create and control form in building, to dispose and deal with mass and void, with surface and shadow, with outline and colour; the art by means of which Ictinus shaped his masterpiece to a hair's-breadth, or Anthemius and Isidorus produced the wondrous interior of St. Sophia, by which the Porches of Chartres were invested with their special stateliness of form, and by which Wren was able to crown our city with a cupola unmatched in studied grace of outline and grandeur of mass combined; an art analogous, surely, to that by virtue of which painters such as Titian or Velasquez paint, or that by which music such as Handel's or Beethoven's is vouchsafed to mortal ears; the art of the artist, as distinct from the handiwork of the artisan; the art of moulding and fashioning the forms and features of building to meet the needs and to embody the imaginings of building man.

THE LATE JOHN McKEAN BRYDON, *Vice-President.*

ALL members of the profession will deeply deplore the loss they have sustained by Mr. Brydon's death. His cheery manner and shrewd good sense drew men towards him, and his tactful way of doing and suggesting things gained the respect of all who came in contact with him. These qualities were such as appealed to most men, but over and above all these his skill as an architect endeared him to his brother artists. Some twenty years ago it was said by one who knew him, "he is an architect well known in his profession but unknown outside it," and the chances that came to him later in life, to show of what stuff he was made, were as heartily welcomed by his fellow-workers as they were appreciated by



himself. No man more justly won his spurs—by hard work, by capacity for taking infinite pains, by researches in Classic and Renaissance fields of labour, by an intimate knowledge of the great works erected by the master builders of all periods, by a catholicity of mind which appreciated that subtle thing termed "style" in all phases of architecture.

To the student who studies his works, it will be seen that though they vary in quality and are essays in different "styles," they are all distinguished by that mark of excellence which shows the mind of the true architect who uses style as a language with which to express new thoughts. The same distinctive quality can be traced in the works of Mr. Norman Shaw and the late J. D. Sedding, men who, like John Brydon, helped to raise architecture out of the ceremonials of archaeology and antiquarianism.

Twenty years ago the chances of his having some great work to do, which would embody

in permanent form his message to succeeding generations, must have appeared very slight indeed, and yet we find him studying and perfecting his knowledge of that type of Renaissance with which he was most in sympathy. At that time Gothic of various types held public approval to the virtual exclusion of everything else, and yet we never find Brydon on the side of fashion in styles for the sake of transient appreciation. His earlier training, under Mr. Bryce, of Edinburgh, gave him a grasp of Classic and Renaissance architecture which influenced all his future career, and we find him in 1866 as managing assistant to Messrs. Campbell Douglas and J. J. Stevenson in Glasgow, where, about that time in the same office, were the late B. J. Talbert, Messrs. Wm. Leiper and Wm. Wallace, all men who later were distinguished in their several spheres. The intimacies of these earlier days became the intimacies of riper years, and Brydon, after two or three years in London as assistant to Nesfield and Shaw, joined Wallace and Cottier in establishing in Langham Place a decorating and art furnishing business on the lines of Morris and Co. This was another of those practical efforts of the architect to get in touch with the handicrafts which afterwards developed into the Arts and Crafts movement. The work undertaken by them consisted of architecture, interior design, and decorative furniture and glass. After a few years the firm was dissolved, Mr. Cottier devoting his energies to the establishment of a picture-dealing business, while Wallace and Brydon returned to the more accepted paths of an architectural practice; but there can be no doubt that the experiences gained in these bye-paths gave Brydon a grip of things which later served him in good stead and made him confident in dealing with the details of a modern practice.

Architectural commissions soon came to him, and in 1883-84 he carried out St. Peter's Hospital, Henrietta Street, Covent Garden, and in 1889 the New Hospital for Women in Euston Road. The London School of Medicine for Women, in Handel Street, Brunswick Square, followed about 1896-97, and this completes the hospital and medical buildings designed by him. In all these works, the exigencies of the plan were of primary importance with him, and we find fine designs growing in a natural manner from carefully thought out and detailed plans.

These works form a very striking contrast to the hospital buildings erected in such profusion throughout the country by public bodies, whose object seems to be to attain the maximum of ugliness combined with a scientific accuracy of cubical contents and superficial area of window openings. One can imagine what a fine chance has been lost to the world by such bodies not employing a man of Brydon's architectural instincts on a huge hospital of three or four hundred beds, where his sense of the architectural fitness of things would have found expression through a plan that would embody the scientific requirements of our time.

In domestic work we find him at first a follower of Messrs. Shaw and Nesfield, and later his own personality comes into prominence. The Village Hall, Forest Row, Sussex, for Mr. Freshfield (afterwards destroyed by fire and rebuilt from his designs); "Lewins" in Kent, for Mr. Joseph Robinson; "Bournemead" at Bushey; "Pickhurst," Surrey; the remodelling and alterations on the Château de Buillon, and a new studio for the painter, M. James Tissot, are works which show his talents in the field of domestic architecture.

Mr. Brydon became acquainted with M. Tissot about the time of the Franco-Prussian War, when M. Tissot had a studio in London, and afterwards they became intimate friends, Mr. and Mrs. Brydon being the guests of M. Tissot on the completion of the new works at the Château.

In 1885 the Chelsea Vestry Hall competition gave Mr. Brydon his first big chance in municipal design, and the works which he then and subsequently carried out in Chelsea—the Free Library in Manresa Road in 1889, and the South-West London Polytechnic in 1891—



CHÂTEAU DE LUILLON, NEAR BESANÇON. GARDEN FRONT.

mark the period when his talents were concentrated on a particular phase of English Renaissance which he made peculiarly his own. This style was also eminently suited to Chelsea, where Brydon's work has the air of being indigenous to the soil.

The block of residential chambers for ladies in Chenies Street, Tottenham Court Road, is one of his most successful efforts. It is a fine bit of modern street frontage design, in which the difficulties of dealing with a great number of small rooms, giving each ample window opening, and boldly grappling with the modern requirements as to light and air, while at



CHÂTEAU DE BUILLOON. GARDEN FRONT, WITH STUDIO IN THE FOREGROUND.

the same time preserving an architectural unity of design, brought out what was characteristic in Brydon's talents. All these works in London are worthy of the careful study of our younger men, and point the way along which further progress may be attained.

In 1891 he gained the first premium for the Municipal Buildings at Bath, and for eight years was employed by the Corporation of that city in designing and carrying out the Municipal Buildings, Technical Schools, the Victoria Art Gallery and Library, the Pump-Room Extensions, and the works in connection with the covering in of the Old Roman Bath. These buildings in Bath comprise the most important of his completed works, and the Corporation and architect deserve our heartiest congratulations on the satisfactory results of their labours.

It was a fortunate chance that enabled Brydon to begin this work, and the authorities did a wise thing in retaining his services for the subsequent buildings, all of which reflect the highest credit on the city whose distinguishing characteristics are the architectural works of the two John Woods and Thomas Baldwin. In Bath Brydon found himself among congenial architecture, in touch with the tradition and spirit of the place, with full knowledge of its rich treasures of eighteenth-century English Renaissance, and felt inspired to do the best that was in him.

About the year 1885 he appears to have found the style most suited to his mind, and the mellowness of mature power is evident in the designs of these and later days. Apart from the correctness of his detail, there is an architectonic dignity and proportion in these later works which distinguished them from mere learning; they are greater than precedent, that anchor of shallow minds.

The grasp of great masses of building and the clothing of these with refined, beautiful, and appropriate detail are, perhaps, most evident in his designs for the Local Government and Education Department buildings in Whitehall. In 1898 he was appointed architect for this important group of buildings, and went to Rome to study the great classic remains and the Italian Renaissance.

His previous visits to the continent do not appear to have had so evident a bearing on his design. Perhaps it was that this later visit on a definite mission focussed his ideas on a phase of design, and enabled him to catch the spirit of the old Roman work. Certain it is that he was greatly impressed with ancient Rome, and found there food for his desire to know at first-hand the masterpieces in the birthplace of an architectural style congenial to him. He had the intention of returning at some future day to Rome and continuing the study of those works, but fate has willed otherwise, and perhaps we see in his Government Offices the most mature exposition of his talents—that simplicity of scheme, breadth of ideas, a mind not afraid of plain spaces, a taste superior to the trickeries of mere ornament, and a fine sense of the dignity of solid building. Every one will keenly regret that the hand which began this work so well will guide its development no longer—and for London's sake, and his, it is to be hoped that his design will be carried out in a sympathetic spirit of appreciation.

Mr. Brydon was one of the "thorough" architects—a man who was conversant with all the multitudinous details of modern practice, who never shirked his work, or passed over any small matters because they were unpleasant or unattractive, or hurried through them so as to get on with what may have been more important or lucrative. Calling on him early this year I found him busy on the details of his Government Offices, designing and drawing the carving of the figures and ornament on the façades, and pointing with pride to the sketch by Professor Cockerell, R.A. (of whom he was a great admirer), for the sculptured pediment of St. George's Hall, Liverpool, he said, "There was a man who knew all about architectural sculpture and could express his ideas intelligibly." Brydon did not believe in leaving these points to the sculptor without first expressing clearly the lines on which the sculpture must be designed, and the success of his work must be largely due to this capacity of thoroughly detailing all portions of his buildings.

The finest credential to the fairness and growing value of the competition system is the fact that it brought Brydon to the front rank, and gave him the opportunity to do that class of work best suited to his capacity. His success in competitions was the success of the man who was confident that good planning allied to architectural design must inevitably find favour, and in this belief he was not disappointed. Had the jury system of assessing important competitions obtained in this country as it does in France, there can be little doubt that Brydon's success would have come earlier and in greater degree. But even under

our imperfect system of one-man assessorship his work often obtained recognition, and many premiums were awarded to him. For the Whitfield Chapel, Tottenham Court Road, the Free Library, Wolverhampton, and the Taunton Town Hall, his designs obtained the second premium; and other important competitions, such as the Edinburgh Municipal Buildings, West Ham Technical Institute, and the Central Criminal Courts, Old Bailey, gave him the opportunity of producing fine designs.

He acted as assessor for the Technical College at Sunderland and the Municipal Buildings at Southend competitions, and always took a healthy view of that method of



ART GALLERY AND LIBRARY, BATH.

discovering architectural capacity and giving it an opening for expansion, which was of such value to himself, and is of great moment to the architectural development of the whole body of the profession.

At the Institute his presence will be greatly missed; his shrewd common sense, combined with his enthusiasm, was always welcome, and his way of stating things appreciated by his colleagues, all of whom feel that they have lost not only a brother in art but a friend who made life sweeter by his genial presence.

JAMES SIVEWRIGHT GIBSON.



9, CONDUIT STREET, LONDON, W., 22nd June 1901.

### CHRONICLE.

#### St. Paul's and the Piccadilly to City Railway.

In a letter which appeared in *The Times* of the 14th inst., the President, Mr. William Emerson, writes:—

"Of late years, more than at any other period of our history, attention has been directed to the preservation of our national monuments. St. Paul's has been the subject of much comment lately in respect of its decorations. But a matter of far greater importance than even the question of its artistic decoration—one which may affect its stability in the future—should, I venture to think, have the greatest possible publicity.

"I refer to the Bill before Parliament for the construction of a tube railway from Piccadilly to the City, which is planned to pass along Carter Lane, within about sixty or seventy yards of the foundations of the dome of this noble structure, and at a considerable depth below them.

"That vibration to a very considerable extent would occur no one in his senses could doubt, and we have had some experience of this in other directions recently.

"It is not the particular violence of the vibrations that might be set up, but the constant quantity that would probably eventually affect the structure, for, as Wren has stated in the *Parentalia*, 'the incessantly vibrating makes a small intestine motion through all the insensible parts of the wall, and by degrees loosens all the bond of the mortar, and moves every stone from its bed; this motion once begun hath its effects more and more till at length it is quite loose and falls.'

"There would be, then, in all probability a very real danger were this Bill passed. It is, I understand, creating great opposition all along the line of its route, and surely if commercial energy may be a source of possible destruction to a national monument like St. Paul's, the voice of the public should be raised in conjunction with that of the Dean and Chapter in the most strenuous opposition to any such enterprise."

#### Site for the Liverpool Cathedral.

A special meeting of the members of the Liverpool Architectural Society was held on the 13th

inst., the President, Professor Simpson, in the Chair. There was a large attendance of members, and the following report was adopted:—

The question of the site for the new Cathedral of Liverpool is naturally one of great interest to all architects, and especially to those practising in Liverpool.

The first essential of a Cathedral for Liverpool is, that it shall be a Cathedral of the diocese, and not of the city only. The most central position for the diocese is that in closest touch with the railway stations. Four sites have been suggested—

(1) St. Peter's Church.	(3) St. Luke's Church.
(2) Monument Place.	(4) St. James's Mount.

These are placed in order of centrality. Of these four sites, Nos. 1 and 3 are not considered, as for various strong reasons they are regarded as inferior to the other two.

The advantages of the Monument Place site are as follows:—Its position and approach are unrivalled in Liverpool. There is an opportunity here for a west front which might be the finest in Europe. The proximity of the site to the great public buildings of Liverpool is of the utmost importance. Its relation to St. George's Hall in view of State processions, civic or otherwise, is of great advantage. It is near to, or in direct communication with, the principal railway stations, and is passed by cars from the pierhead as well as by those from the north and south of the city. The site is a very high one, the level of the ground at the west end being the same—132 feet above the Datum line—as that of the St. James's Mount site, and any building, therefore, erected thereon would be as visible from the river and the Cheshire side as one placed in the latter position. The foundation is rock. The removal of many of the buildings at present on the site would be of distinct advantage to the welfare of the city. Finally, the orientation would be that customary in English cathedrals and churches.

The disadvantages which have been urged against it are:—The cost of the site; the noise from passing cars and traffic generally; and the surroundings. As regards the first, this is undoubtedly very great. The question of noise is not a serious one, owing to the construction necessary for so large a building. St. Paul's, London, is very similarly placed, and the sound of the traffic outside is hardly, if at all, perceptible inside. The surroundings, it is true, are not all that could be desired; but cathedrals ought to be equally accessible for all classes of the community, and the most favoured quarters are not necessarily the best for these buildings.

The advantages of the St. James's Mount Site are as follows:—The site itself would be much less expensive than that of Monument Place. The situation is a quiet one, and the surroundings are picturesque. Any building erected here would stand out well, and could be seen from the river and Birkenhead.

Its disadvantages, in our opinion, are much greater than its advantages. Its inaccessibility is perhaps its greatest; it is far removed from the main lines and centres of traffic. The site is a very narrow one, and it would be difficult to obtain a good near view of any large building placed upon it. The approach, in an architectural sense, is very bad indeed, and no vistas would be obtainable from any point. The cost of the foundations would be very heavy: either the present mound would have to be removed, or else the foundations would require to be carried down very deep. The suggested suspension bridge over the cemetery would be exceedingly costly and possibly unsightly. If the cathedral is placed as has been suggested, the orientation will be contrary to the immemorial traditions of the English Church. A practical objection to this proposal is that the sunlight striking through the window or windows at the end of the chancel, which would be south, would be a very serious inconvenience to the congregation.

In conclusion we consider that questions of economy ought not to be allowed to over-ride every other consideration in placing a building which is to stand for all time. A cathedral need not be built in one life-time or by one set of donors. We suggest that it would be possible and sufficient for this generation to make the commencement of an entirely worthy work by acquiring a part of what we consider to be the best site (Monument Place), and erecting a portion of the building upon it. This portion might be either the grand west front and nave, taking up the frontage to Monument Place and extending back to Anson Street, or it might be the chancel and transept portion, which would stand on the cheaper land, eastwards, with a temporary west entrance from Anson Street.

In matters of vast importance, such as this, the only thing worth aiming for is the best, and it is our experience that, in the long run, this is the most easily obtainable.

#### The Architectural Museum.

The Council of the Institute and the Council of the Architectural Museum have come to an agreement whereby the Institute makes an annual donation of twenty guineas to the Museum, and, subject to existing arrangements, three representatives of the Institute have seats on the Museum Council, and members of the Institute and of the Architectural Association have free admission to the Museum for sketching purposes at all times when it is open to the public.

#### The Nottingham Society and Competitions.

The Annual Report of the Nottingham Architectural Society refers with satisfaction to the action of the Council of the Society in regard to a local competition, which resulted in the promoters agreeing to modify and considerably improve conditions which, as first issued to competitors, were very unsatisfactory and injurious to the interests of the profession.

The following memorandum has been drawn up by the Council of the Nottingham Society for signature by members of the Society, and by non-members practising in the district:

"We, the undersigned architects, pledge ourselves not to submit plans in any competition promoted in the province of the Nottingham Architectural Society, unless the conditions are those published by the Royal Institute of British Architects, or in accordance with the spirit of the same."

The Report states that every local member of the Society except one has given this pledge, and only one outside architect has declined to sign, though he expresses his approval with its object. The Council invite architects, on hearing of a competition being mooted, to at once notify the Hon. Secretary, so that the matter may be taken up officially by the Society or by the R.I.B.A.

#### The late John Alexander Russel Inglis [A].

The death of Mr. J. A. Russel Inglis, of the firm of Messrs. Williamson & Inglis, of Edinburgh and Kirkcaldy, which took place under peculiarly distressing circumstances on Sunday, the 9th inst.,

closes a career of considerable promise. Mr. Inglis had been suffering from insomnia, consequent on overwork, and succumbed to an overdose of a sleeping draught. He was only thirty-one years of age, and was to have been married on the following Tuesday.—Mr. Inglis served a five years' pupilage with Mr. James B. Dunn, architect, of Edinburgh, and afterwards entered the office of Mr. Hippolyte J. Blanc as assistant. He was an enthusiastic student, and attended the classes of the School of Art and Heriot Watt Institutions and the Work Classes of the Architectural Association in Edinburgh. Leaving Edinburgh, he spent some time in the office of Mr. Wilkinson Moore, of Oxford. Coming to London in 1893, he passed the qualifying Examination, and was admitted an Associate of the Institute in 1894. In the competition for the Institute Travelling Studentship, the Soane Medallion and £100, in 1897, his design for a Provincial Market Hall was selected for the prize from among fourteen competitors. His studentship tour, extended to nearly a year, was made in Italy and Sicily, and his talents as a draughtsman were again shown in the varied collection of drawings resulting from his tour which were exhibited with the prize competition drawings at the Institute in 1898. On his return to Edinburgh Mr. Inglis entered into partnership with Mr. William Williamson, of Kirkcaldy. The firm were recently successful in the competition for Kirkcaldy Police buildings. The Hon. Secretary, at last Monday's General Meeting of the Institute, made feeling allusion to the untimely loss of so promising a member.

#### The Royal Institute of Architects of Ireland.

A deputation from the Council of the Royal Institute of the Architects of Ireland, headed by the President, Sir Thomas Drew, waited on the Local Government Board (Ireland) on the 14th inst. to make representations against the system under which unqualified men are frequently employed as architects, civil engineers, and clerks of works by Urban and Rural District Councils and like public bodies, and to urge a demand for an amendment of the present Act which would enable the Local Government Board (Ireland) to provide a safeguard against such appointments. The Board promised to give full consideration to the views put forward by the deputation.

#### The New Belfast Society.

The Secretary has received the following communication from Sir Thomas Drew [F., R.H.A., President of the Royal Institute of the Architects of Ireland]:—

I am glad to inform you that at length, after many difficulties, a Society of respectable architects has been established for the north of Ireland. Heretofore, as you may be aware, the position of the profession of architecture in the important city of Belfast (with a population of 380,000) has

been a scandal and discredit to the position of architects in the rest of the kingdom. I cannot say that the perfect chaos of professional practice and usage, and the indecencies of rivalries and competition for fees at any amount, and the low social standard of a large body practising as architects in Belfast is at an end, or even that for years the status of the architect may be in line with other cities of the kingdom. A good beginning, however, has been made by an association of the better class of architects, and prevailing scandals of architectural practice will be checked by notoriety and publication of them at least.

This Society will, for the present, be affiliated to and in harmony in its by-laws with our Institute of Architects in Dublin, and will practically, until its mature existence is assured, be under the influence of the Royal Institute of British Architects, through ours over it as an Allied Society.

The members of the new Society have done me the honour to insist that I shall be first President of it in my native town, with Mr. W. I. Gilliland as a working Vice-President, and Mr. Fitzsimmons as Secretary.

I beg to commend the Vice-President and Council of this Society to the courtesies and consideration of the Royal Institute of British Architects in any passing communications, as being composed of gentlemen of respectable practice, and desirous of loyalty to and conformity with the observances and rules of the Royal Institute of British Architects.

#### The Architects' Benevolent Society.

At the General Meeting of the Institute last Monday, the President, who is also the President of the Architects' Benevolent Society, said he had much pleasure in announcing that the appeal which he had made at the Annual Meeting of the Society, and which had been so promptly supported by Mr. Macvicar Anderson's generous offer to contribute £100 if the sum were made up to £1,000 by contributions from other gentlemen, had been quite successful, inasmuch as £1,189 2s. had already been received. The Society was greatly indebted to the gentlemen and Allied Societies who had so promptly and so liberally responded; and it was particularly indebted to Mr. Macvicar Anderson for his personal exertions in the matter. Although this sum had been received, the President hoped that the announcement would not stop the flow of contributions, as the demands upon the charity of the Society were large, and the pensions and grants which it was enabled to give were sometimes quite inadequate to the circumstances of the case. No one knew better the needs of the Society than Mr. Arthur Cates. He was for many years its Treasurer and at the time of his death a Trustee. Mr. Cates, knowing so intimately the work of the

Society and the inadequacy of its means to meet the demands made upon it, had, he had seen announced in *The Times*, bequeathed to it the sum of £1,500. This handsome bequest, he thought, was sufficient to show that the Society needed more liberal support, and that the money entrusted to its care was wisely and carefully distributed.

#### Mr. Gordon Smith's Retirement.

The retirement of Mr. P. Gordon Smith from the Local Government Board does not seem to have received that notice from the professional press that such an event might warrant. There are very few practising architects who have not come into contact with Mr. Gordon Smith, and one and all can testify to the kindness and sympathy which he always exhibited in the conduct of the public duties which devolved upon him. It is pleasant to have an opportunity of recalling the many instances in which he was of service to his younger colleagues. So important an office as that of architect to the Local Government Board, requiring not only skill in the interpretation of Acts of Parliament but also an intimate acquaintance with practical architecture and professional methods, should be filled by an architect of recognised position and attainments. It is gratifying to note that Mr. Gordon Smith is once more on the Council of the Institute, where his wide experience has always been of great value.

#### MINUTES. XV.

At the Fifteenth General Meeting (Business and Ordinary) of the Session 1900-1901, held Monday, 17th June 1901, at 8 p.m., the President, Mr. Wm. Emerson, in the Chair, with 26 Fellows (including 11 members of the Council), 24 Associates (including one member of the Council), and several visitors, the Minutes of the Meeting held 3rd June 1901 [p. 384] were taken as read and signed as correct.

The President stated that in response to his appeal on behalf of the Architects' Benevolent Society, contributions to the amount of £1,189 2s. had been received.

The Hon. Secretary announced the decease of John Alexander Russel Inglis, Associate.

The following members attending for the first time since their election were formally admitted and signed the respective Registers, viz. Joseph Compton Hall, Fellow; Charles Spencer Haywood (Accrington) and Robert Henry Jewers Mayhew, Associates.

The following candidate for Fellowship was elected by show of hands under By-law 9, viz.:

CHARLES JAMES SCULTHORPE HALL.

The Secretary announced the results of the Intermediate Examination held in London during the previous week.

A Paper on "Education in Building," by Professor W. R. Lethaby, having been read by the author and discussed, a vote of thanks to Professor Lethaby was passed by acclamation.

The proceedings then closed, and the Meeting separated at 10 p.m.

## LOGICAL BUILDING AND ITS INFLUENCE ON DESIGN.

By THOMAS GEOFFRY LUCAS [A.]

[Read before the Leeds and Yorkshire Architectural Society, 4th March 1901.]

IT will be best to begin our consideration of this subject by quoting a few words from Mr. Lethaby's book on *Santa Sophia, Constantinople*. Speaking of marble masonry he says:—

"After more than a thousand years of working marble through one complete development, Greek builders, by considering afresh the prime necessities of material, and a rational system of craftsmanship, opened the great quarry of ideas in constructive art, which is exhaustless.

"In a hundred years architecture became truly *organic*; features that had become mere "vestiges" dropped away, and a new style was complete; one, not so completely winning as some forms of Gothic, but the supremely logical building art that has been. If anywhere this vitalising had not been completed, it would have been in the more decorative forms: but here we find no mere exercise in applying architectural orders—everything is as fresh as in the structure."

A more suitable introduction for the subject of "Logical Building and its Influence on Design" cannot well be found, and it is therefore unnecessary to apologise for bringing this subject before you. It is one of the greatest interest to those who desire to produce real, living, truly organic and "supremely logical" architecture in an age which we are pleased to consider the greatest the world has ever seen. In the last century there has been a great stirring among the dry bones of all the various art callings, and this has been most noticeably so in our own; but it would seem that we are still very much in the stage of asking the question: "Can these bones live?" In spite of the production of what some would call truly living work, and of much that is interesting and clever, can we say when we look at the bulk of modern building that it in any way expresses the deep underlying tendencies of present-day humanity, in the same way and degree that architecture certainly has incorporated such ideas, sympathies, and feelings into itself in the past? We must admit that when we apply such a test as this to it, modern work does not at all give a satisfactory result. It somehow falls far short of the ideal architecture we should expect to see expressing a golden age in the world's history. Rather do we find its aims to be small, commonplace, and unambitious, and it is treated without seriousness, in a flippant, off-hand manner. Of course there are good buildings produced nowadays; as samples of true architecture, some may be as good, perhaps, as can be found in any age.

A larger number of buildings erected for new purposes and for new requirements are decidedly

satisfactory, and contain germs of promise of better things; and as more or less correct copies and studies of past manners a great number of edifices can be pointed out all over the land; but the bulk, the great mass of modern building fails to give even this satisfaction, and is unworthy to rank even as the ordinary architectural expression of the nineteenth century.

These remarks apply not only to works on which a professional architect is employed, or which lay claim to any architectural interest, but also to all buildings erected without such aid or such purpose. How comes it that such simple buildings even as cottages, put up in the not very remote past, invariably possess a charm which is not by any means the result of age in the building, and which is conspicuous by its absence from their modern equivalent? How is it that a small house erected now by a builder is bad in any case, and worse if the man attempts to beautify it? It was not always so, as we can see by the delightful cottages and town dwellings remaining to us from bygone times.

We cannot rest contented with this state of things, and to us therefore as professional architects is set the task of improving modern building; and in this is included that which we understand by architecture, as well as ordinary building. In an ideal state of things these would be one and the same thing, but are now sadly differentiated, for it is an astonishing fact that modern building, without the employment of a professional architect, can in no sense rank as architecture. But the very humblest old building can lay claim to some architectural character, not imparted to it in an architect's office, but as the thing grew up and by the men who built it.

By the careful study and skilled reproduction of ancient manners of building architects in the immediate past have accomplished much. They have traversed the whole range of architecture, and to-day we reap the benefit of their labours, inheriting knowledge ready to hand which they had taken years of infinite pain and toil to acquire. The great achievements of building which may be ranked as architectural works of the lately-closed century are almost entirely scholarly and archaeological, and their chief value as architectural works lies so much in the successful exercise of this power of reproducing the past that they cannot be said, in the best and truest meaning of the words, to satisfy the needs of living architecture. The finest architecture has

a further object in view than the mere meeting of necessities in a commodious manner, or of building beautifully; and to some extent any building, however humble, if it is to rank as a work of architecture, must also join in that object.

Architecture is one of the great arts—perhaps the greatest—and the aim of these arts is beyond utility, beyond beauty even: it appeals right to the heart of man, teaching, subduing, and leading up each in its separate sphere to the fullest revelation of Truth. Each individual work of any of the great arts—which are all branches of the same great art, the knowledge of Truth—is of greater magnificence than others in proportion as it reflects Truth in itself.

How difficult this is, and how constant and varied the striving after it, the whole history of art will show. Each age has its special features denoting its endeavour to give the fairest likeness of Truth; and these special characteristics belong to it and to no other age, making it the living art of its time. But in our time there has been a resuscitation of all the ages, as it were, and we cannot allow such to be a healthy state of things, or conducive to the production of living architecture.

Seeing, then, that the careful and scholarly reproduction of ancient manners does not suffice to produce an architecture interpreting the needs and aspirations of our time, the necessity arises of finding some other way in which we can achieve this result. Like mankind, architecture is emphatically progressive. And in the past we find that progress was made, not by returning again to ancient ways with the sole object of reproducing them, but by a steady development and extension of the knowledge gained by experience.

But in spite of this, some would say that the best method of advancing and improving our outlook is to break away entirely from all restraint arising from what has been achieved in the past, and for each architect to be as clever, ingenious, and curious as he can be. Though this is impossible, there is undoubtedly such a tendency among some architects. But we may dismiss it, from the evident want of cohesion which is sure to be the result, as likely to be of no benefit to anyone. Such a proceeding is bound to degenerate into the grossest commonplace, or the perpetration of utter foolishness. To be saved from this is the true necessity for the existence of "style" in architecture. We must find some surer ground on which to advance.

With more knowledge of what has been done in the past, we can see that one great and vitalising force in architecture was logical building, and this view of architectural progression is assuredly coming to the fore among architects, and being welcomed as a means of producing better and more living work to-day. Its acceptance never leads to the production of an entirely aimless

or barren building, nor of one devoid of thought of a right kind; and it opens up to the designer untold possibilities of beauty in form and order. As Mr. Lethaby points out, in a short time its principles developed Santa Sophia as a model of logical constructive design, and again and again in the history of building architectural triumphs have been the result of its application. The need for living architecture is felt. The necessity of applying a new and revivifying force to architecture has arisen. The application of ancient forms and details has but produced excellent and scholarly reproductions. With the experience gained, is it not time to study the right use of material, and to apply the *ancient principles of logical construction* and development of a design, in a bolder and more characteristic way?

But there is one warning which must be given. Do not proceed without knowledge. It is impossible to have too much knowledge of old architecture, for knowledge is power. It is because of this we must welcome our inheritance of the knowledge our fathers have found out for us, a knowledge to which all good recent building owes its beauty and its right to rank as architecture, and the possession of which is sure to express itself in our work, even if only hinted at in the structure, rendering it scholarly and cultured and curbing the imagination.

If on the score of art it is necessary to revitalise architecture, it is equally so of construction. We must not forget that architecture, besides being an art, is emphatically a science, and this vitalising power must be applied to both alike. Architecture contains both the art of adornment and expression and the science of construction and building; and these two aspects of living art are so indissolubly bound up together that it is impossible to sever them. They have, as it were, become one flesh. If we refer to ancient building it will be seen that no change took place in its history which along with it did not bring these two questions of logical construction and logical adornment. But it would appear nowadays that adornment has been divorced from construction, and such a state of things has not benefited the art of building, for adornment and expression have to a great extent been stationary and archaeological, so that we find to-day that they are used in a most inconsequent manner, the result being extravagant waste and lavish show without either wealth or refinement.

Construction, however, thus divested of its helpmate, and calling itself engineering, has progressed by leaps and bounds and produced masterpieces which call forth the admiration of everyone for their ingenuity and boldness. But here they stop. They exist for the bodies of men, and are triumphs of will; but it is impossible that we can say they appeal at all to their souls and spirits. Construction and adornment thus

standing alone are like bachelor and spinster. It is only in their union that both will find the complement of the other and fulfil the functions of building in the highest and best way.

We have thus agreed that, in general, modern architecture requires a vitalising power if it is truly to represent the tendency of modern times, and that it is open to improvement in the welding together of adornment and construction. If this is not so, then is architecture in a truly parlous state. For no one who claims the name of artist should ever be completely satisfied with his work, however much trouble and care he takes over it. When this happens he has turned his back on progress and entered on the down grade.

Many of us have no doubt often asked ourselves the question, and each will have a theory to propound, as to how the architectural outlook is to be improved. I do not claim originality for the views I may put forward, but if they serve to remind us anew of points which are often overlooked in our work this Paper will not have been prepared in vain. Architecture is not drawing, but building; and we must bear in mind that to theorise about it will not improve it unless we put our theories to the test of tangible expression. I ask you, therefore, with this object in view, to look upon architecture as supremely logical building, and from this standpoint to sift your ideas with regard to the modern practice of it.

As may happen with any way of looking at a subject, it is possible to push matters too far; and it would seem that some architects who have embraced this view of architecture have already done so. There are some who, in their zeal to break away from the chains of the past, have eschewed mouldings, except of the most meagre kind. But this is surely absurd, leads to nothing, and reduces the architect to the endless repetition of a first production. A moulding is as a magician's wand in the hand of a skilful artist. As it exists from the most essential causes and fulfils the most necessary requirements, it is capable of most logical handling, and by its treatment effects can be produced upon the beholder which cannot be obtained by any other means. Surely, therefore, a moulding is one of the most useful pigments on an architect's palette. There are also those who, while they have grasped the fact that logical building exists, have not got so far as to see that it is diametrically opposed to absolutely illogical picturesqueness—a picturesqueness not the outcome of any necessary requirements, for which there is no constructional cause, and which does not arise from materials used.

Picturesqueness, although valuable, ought to be not the direct aim of the architecture of a building as it leaves the master's hand, but

a side issue, or the result of years of wear and tear and of history. Architecture is a finer thing than mere picturesqueness. One need only mention as examples the use of gabled and hipped roofs in the same building, for no reason at all than this desire to be picturesque; the employment on one building of a vast number of materials, such as stone, rubble, brick, half-timbering, roughcast, plaster, tile-hanging, slate-hanging, weather-boarding; and the use of plain verges, barge-boards and copings to gables, rafter feet, plaster soffites, cornices and parapets to eaves. There are to be seen towers on unimportant buildings which are not wanted for purposes of water supply, or as land-marks, for prospect or defence, or as clock-towers or otherwise; and sometimes a portcullis, which will go neither up nor down, and which is neither useful nor ornamental. Again, one frequently sees windows thrown about a building without due regard to order or arrangement, and executed in leaded lights and stone dressings, leaded lights and wood frames, sash windows, mullioned windows, transomed windows, plate-glass windows throughout or in the bottom part only, with small squares of coloured glass in lead or wood at the top, just where light is wanted or there is possibly some sky to be seen—all of every possible shape and size, and all in a single house. Such things are frequently met with, and as frequently admired; but for all that they are bad. If variations of such things are used in a building they must fulfil a requirement in the best way, be backed up by sound constructional necessity, and have an all-sufficient architectural reason arising from architectural logic, which is something more than merely good taste. When we come to the question of clothing a modern building in the remnants of an ancient architectural garb—for this is what it amounts to—I do not think anybody can be found, after careful thought, to claim such a state of things as truly living architecture. The raven adorned with the tail and feathers of a peacock only raised the jeers of the other birds.

There are many other points in modern architecture which can be raised to show its illogical condition. There is the question of the concurrent use of all sorts of manners, not only in one century, but by one and the same man. If architecture was living, this ought not to be the case. In the prime of the great architectural periods of the past work was produced which could not possibly have been different in the main ideas and principles from the form it took. But to-day the same architect will produce a Gothic church, a Renaissance town-hall, with an alternative design on the same plan in Gothic, a Classic bank, a house in any English or foreign manner, and a pavilion in any outlandish style desired. Such a state of things is not consonant with logical building. When Classic temples

were built, Classic houses were built; when Gothic churches, Gothic houses—everything Gothic.

The question of style is equally one of sympathies and feelings, the outward expression of man's inner thoughts at any one period, moulded and welded by the influence of history and the tools and materials he wrought with, as it is of forms and features. There is a further point which arises in connection with this, and that is that some architects would appear to require work which can only be described as rough-and-ready. This is due to an exaggerated conception of what is called texture, and a distorted view of draughtsmanship. Nowadays, when there is no excuse for any lack of excellence owing to indifferent or bad machinery, it is surely detrimental to the interests of both art and labour to require an excellence of finish which is certainly not the best attainable. I am referring only to work which on the face of it requires the nicest regularity possible, and not to the carving of repeated forms or other ornament. In the latter case the effect is tame and illogical, if each repetition is an exact replica of the previous one down to the minutest particular. It is decidedly suitable to be able to say on looking at such work: "This is hand done; it is not all hard, smooth, or equal, and the man enjoyed doing it, for he has slightly varied the forms of each block of ornament. He has used his head and fancy in inventing varieties and in the introduction of quaint and curious devices, and has not merely acted as a machine." But I maintain that in modern work it is an affectation and illogical to require irregularities in such things as call for most careful workmanship.

The sham-old does not deceive anybody, nor does it impress anybody with the effect its designer wanted to produce. If it is at all sensible the utmost that can be said for it is, "It looks *almost* like old work." What we ought to be able to say about a building is not this, but "I like this building, because the man who did it knows what he is about; he knows about old work, but did not choose to copy it. He has not put forth all his knowledge, but has a lot of reserved strength. It is a modern building for modern men; no other time than the present could have produced it. There is nothing here the building could part with except to lose by it. I know its purpose without being told. What picturesqueness it has is the direct result of plan and material, and arrived at without any straining. The building looks to me like an honest effort to meet requirements directly, to use material rightly, to construct in it truthfully, and to adorn it suitably. There is a good deal of thought in this building of the right sort; it seems to me I should have done it in the same way, and indeed it is difficult to see what other way could be more suitable, as the building hangs together like a well-thought-

out argument, and is perfectly satisfactory as a logical building."

A building about which this could be said would certainly be far on the road to be a fine thing, and there is nothing here beyond that which any educated man ought to be able to say of any building. But to how many modern buildings, when we look well at them, can we apply these remarks? Certainly not to many; and it is only fair to say that, when we inquire into the causes which tend to failure or success, the influences of the former far outweigh the latter, and the marvel is that such good work has been produced. A few of these causes may be briefly mentioned.

As tending to failure, the first is perhaps the lack of interest in architecture among the general public, and, when they do take cognisance of work, the demand that is made for replicas of ancient ways. But in old days the interest of the public was a great incentive to architectural development, and achievements in art were welcomed with great acclamation. To-day, could any of our poets—whether he be a Court poet or otherwise—write as Paul the Silentary did about Santa Sophia, or can we imagine a triumph of the painter's art carried in procession through the streets, as Cinabue's Madonna was at Florence? But we need not go abroad for instances; there are records in our own country of great and intense enthusiasm felt in the achievements of art, and what is not written down in parchment is preserved in the actual buildings themselves.

It is sometimes said that the English people are not an artistic race—foreign nations are praised for their artistic qualities and the Englishman's work accounted unworthy of note. I was glad to see that the Professor of Sculpture at the Royal Academy, in his recent lectures on Italian sculptors, drew attention to the fact that we in England also had had native sculptors of surpassing excellence, and he cited the effigies in the Warwick Chantry as specially worthy of note. As it is in sculpture, so it is in the other branches of art, and of architecture. The country teems with structures, from the humblest cottage to the grandest cathedral, which are priceless heirlooms, telling of a love in our ancestors of good architecture for its own sake by people naturally artistic.

With such evidence before us we can safely say the English were, until comparatively recently, an artistic race—and that the quality was as widely spread as among other nations. If the English people are not so now it is because we live in days of trade and not of labour. But it must be added that there has been an immense advance in the appreciation of the beautiful by the public, and that this is making itself felt in the demand for architecture. It remains for architects to supply the demand, as

they have done in the past. The existence of such heirlooms as the old ecclesiastical and civil architecture of England is chiefly useful in telling us what has been—and what ought to be to-day—but not to lay down the law of *how* it is to be. To study antiquity so as to obtain a knowledge of the history and achievements of mankind is right, but it is wrong to do so with the object of repeating those achievements without their history. The archaeological school has done this. It cannot thus be said to have produced a modern architecture expressive of the real life and motion of the nineteenth and twentieth centuries. Its work has only an historical value, showing in us a sense of the greatness of the past, and admiration of its buildings; and it is a confession, tantamount to declaring that our forefathers were better, more able, and more artistic than we are.

This being so, it can be said with justice that the archaeological school has been detrimental to the advance of architecture in the way of originating a fresh style or manner; but it has been of great value in bringing before us the character of architecture as noble building. So that archaeological knowledge (and the more of it attainable the better if used as a stepping stone to further achievements, which, while expressive of great scholarship, are so attuned to our time that no other age could have produced them) is to be welcomed and striven for by all true architects.

Though there is intense activity in the building world, great opportunities for buildings of the largest magnitude and devoted to the highest purposes are rare, and when they do occur are not always open to architects; and this fact must be put down as one cause of failure of high achievement—for it is undoubtedly true that the demand creates the supply. Yet at the same time, to make a success of a big thing needs either a tremendous amount of preparatory exercise on the part of one man, or the existence of traditional building methods. But owing to the progress of civilisation at home, and in the colonies, there have been such opportunities within this century, in numbers beyond the average. These have called forth big buildings, but is there as a rule such a character about them that we can class them as really great?

Truro Cathedral was one opportunity, calling for the display of the rarest architectural skill. No one will question that a fine building has been produced, as perfect a reproduction as possible, but, it must be confessed, one decidedly out of touch with the sympathies, the needs, and the aspirations of modern life, and one which as a modern building is absolutely illogical. Such a building might well express the ideals and the work of the English Church in the Middle Ages, but history shows that, though the Church in essence remains one, its outward expression adapts itself to the needs of the time.

Again, Sir Charles Barry has given us a great

building in the new Palace of Westminster, the greatness of which is not dependent on its architectural details, but on the sentiment pervading the whole structure, and the impression the building makes is largely aided by its size, position, surroundings, and uses. If we analyse its architectural worth we must admire the grandeur of its scheme of plan, but from the standpoint of logical architecture we find it to run counter to our principles and convictions. Our legislators govern modern England, and when a new palace is required for their accommodation it should be frankly a modern structure, and not one likely to deceive as to its age. Adjacent to this is a building about which a great deal has been written and said, and much more might be added without exhausting its value. For robustness and energy, New Scotland Yard is perhaps unrivalled in modern architecture.

It is interesting to note, about these three buildings, one point in their architectural treatment. The Church looks back to a time when it was the supreme teacher and leader of men; the State to the time when it gained its power and expanded its influence; and lastly there is the civil power, free and young, but still requiring the nursing and restraint of law and order to guide it aright.

This, however, is not enough: these three are real forces at work at the present day, just as real as ever before; so should they be expressed, not by the use of a dead mannerism, based on ancient work, but by means of living architecture.

There is a further building now erecting, to be put to the highest uses and of the greatest magnitude. This is also an example of great scholarly knowledge, but it appeals to all irresistibly by the directness of its construction and the logic that pervades its whole frame from end to end—perhaps because it is built after that manner which Mr. Lethaby describes as “the supremely logical building art.” This building is full of promise, and even now in its incomplete state is assuredly one of the most expressive and purposeful buildings we possess. The new Romanist Cathedral at Westminster may fitly be placed as the culminating work of nineteenth-century archaeological architecture in England, and not only this, but as that building which strikes the keynote for further progress in the century which has just opened.

Of the buildings above mentioned the churches consist mainly of one great hall, and exist for one great purpose, but the others have many rooms, and all the departments of a large social organisation are housed in one edifice, and the various cogwheels of this huge machinery have to work without friction. Here is a further cause which has hampered the development of modern architecture. This is the complexity of modern life and requirements arising from an elaborate civilisation. The simpler the use of the building, and

the less complex the accommodation required, the more easily is a logical edifice evolved and the more hope is there of producing an harmonious effect; but when the uses and accommodation required become complicated and manifold, so much the more is the difficulty of the logical solution of the problem increased.

Study the plans lately published for the rebuilding of the Old Bailey, and note the exceeding difficulty of the problems to be solved, which included the logical solution of questions of sentiment, dignity, convenience, separation of various departments, supply of definite amount of accommodation, privacy, necessity, safety, health, site, space, light and sound, and a host of other architectural questions. Could anything be more complex? These same questions apply to every building to a greater or less extent, and the solution of them leaves but little time and room for the consideration of logical architectural expression.

There is another point which is undoubtedly largely responsible for the failure of high achievement, and this is the withdrawal of the architect from personal contact with his work. Such a thing has been brought about among other causes by the development of the present contract system, requiring the settlement of all questions connected with the building before a single stone is laid, which renders an architect's work entirely an effort of brain power as far as the actual design is concerned, and does away with all chance of development during the work.

Other causes which have led to this fatal result are aggressive by-laws and the competition system.<sup>6</sup> The great advance in the art of draughtsmanship, on the excellence of which many designs now largely depend for their value, for it is not always by any means those things which look the prettiest when nicely drawn to scale that are the finest in execution—has also considerably helped this state of affairs; as well as the ridiculously low rate at which an architect is remunerated, necessitating his having a number of works proceeding at one and the same time, to none of which can he give the full attention which the old men bestowed on the works of their hands. We are led to understand that in ancient days the architect was the chief artificer at the building he was erecting, but as such a thing exists no more it is wonderful that so much good work is produced, and not at all to be unexpected that we meet with many caricatures and unsuccessful efforts.

A further consideration which is bound to lead to the falling short of the highest achievement is the view that some architects take of their buildings. They apparently regard their works as a means of self-revelation—a sort of mirror in

which they can reflect their own idiosyncrasies, and a splendid medium for advertisement. Thus they talk a great deal about the personality of the architect; but on looking at old work it does not seem that the highest achievements have been attained by any efforts to express the personality of their architects, but by the complete suppression of the man in his work, the strenuous endeavour to reveal principles and obey laws, to build logically, and to express great and abiding truths through the medium of prosaic building materials. The architect of any of the masterpieces of ancient building does not speak to posterity of or for himself alone, but is one of the voices of his time as surely as are his contemporary poets and scers.

But, although these points and many others make a great army of opposition to any advance in architecture, the case is not entirely hopeless, and there certainly are many things which aid in restoring the balance. The first thing is that we live in the twentieth century—an age rich in many things which ought to produce a vital and living architecture. As the latest, it inherits all previous achievements, and each year adds new riches to its store. It is rich in knowledge of the past; archaeological research has never before produced such stimulating discoveries, unravelled so many knotty questions which relate to the scope of architecture and demonstrate the reason of the forms it has assumed, or told us so much about the lives and customs of ancient peoples. It is rich in examples of what has been done, and in the ways in which our forefathers solved problems, assimilated current thought into architecture, and taught lessons through it.

It must also be remembered that we to-day have the benefit of having the prevailing views on architecture, and the best modern and ancient work brought before us by means of photography, by exclusively architectural publications, and by increased facilities for travelling—things which were unknown in the days of bygone architectural triumphs. Our buildings are put up for quite as great and as varied purposes as in old days, so that the area for expression is as large. We possess materials which the ancients never dreamed of. So much has the means of transit improved, that England has become the storehouse and market for all the products of the world, and this is now so well established that there is not the same force to-day as there used to be in the custom of using the native material of a place for its buildings. Science, again, has to some extent discovered the elixir of life—and its knowledge is open for all to use; it has given us almost miraculous machinery, and it has benefited every branch of industry.

There is no reason to consider that architecture suffers to-day because money cannot be found for its erection. As for labour, it is to-day as plenti-

<sup>6</sup> See Paper by Mr. J. J. Stevenson on "Difficulties and Hindrances in Producing Good Modern Architecture," read at the Royal Institute on the 21st January 1901.

ful as formerly, perhaps more so in proportion when we take into consideration the improvement in machinery. It is quite as skilled, and only requires education and interest in its work to be rid of a slipshod and slapdash tendency which is not entirely the fault of the worker. But labour to-day is free, not enslaved, and this ought to be its crowning privilege, and where it is rightly employed it produces as good workmanship as in ancient times.

As for inventive genius, this has nearly turned the world upside down with its activity; and it is placed at the architect's service to produce new materials and new methods to meet all purposes. When we come to the field of thought, we must admit that to-day thought is quite as rich and deep as formerly, and more active; and in the social world the ideal of the brotherhood of all men was never before so firmly established in the minds of the leaders of men, or produced such seething emotions among the toilers.

In the religious world there never was such striving to understand the deep secrets of Revealed Truth, such a desire to complete the benefits which are to accrue to mankind from Christianity, or such intense activity. All these things should affect and stir the soul of architecture down to its very depths, causing it to be the mother of children which for beauty, grace, order, suitability to purpose, constructive skill, expression, and all that goes to make living architecture, are the logical outcome of nineteen centuries of strenuous endeavour.

After a hundred years of revivals and the reproducing of ancient manners, we stand within the threshold of the twentieth century: and the architecture of the portal is a revised version of a three-hundred-year-old English edition of an Italian revival of the Roman manner of building, adorned with ornaments borrowed from Greek sources, once the outcome of perfectly logical constructive methods, but now sadly deprived of their original purity.

This present condition cannot be considered satisfactory as a stage of logical advancement; the palpable gaps in the argument are filled up with entirely different methods of building. The question therefore arises, *Are we to go on like this—building illogically?* Each one must answer this in his work according to his ability, and as circumstances allow. But may it not be suggested that those of us who wish to advance will do so best by taking as our guide a strong determination to build logically?

To attempt an elaborate dissection of the application of this principle of logic to building is beyond the limits of my Paper: my object has been to draw your attention to the existence of such a thing, to point out that it is necessary to grasp its meaning if we are to make any advance at all, and to invite each one to the consideration of the matter. It will suffice if we ask ourselves,

“What will be the general effect on current architecture of the principle of logical building?” Undoubtedly it will be to purify it—to strive to do away with what has been called “architectural Billingsgate” which meets us at every turn; and indeed it is sadly in need of such a process.

Some may argue that logical building has a tendency to plainness, to the work being the merest construction necessary to meet necessities. Even if this were so—but it is a very difficult point to prove—far better is simple building which fulfils necessities in the best way than an elaborate one which is altogether unpractical. The latter case is as if a painter completed his picture while leaving his principal figure all out of drawing. But it would seem that the question of logical building does not in any way attack the elaborateness of the structure, but only its unreasonable elaborateness.

The great point is that the adornment should be suitable to the nature of the building, and serve only to enhance the expression of its purpose, and the effect intended to be produced, and that it should be part and parcel of the construction. In a living architecture it should not be the reproduction of previous achievements, but spontaneous, and the offspring of all the circumstances of its time. This cannot be denied; but to-day we find endless reproductions of ancient forms with but little attempt to produce, without affectation, anything that contains a promise of better things.

Taking logical building as our guide, we shall find a succession of points in the evolution of our structures to which we can apply it, as a gardener does a pruning knife to his fruit trees, with the object of rendering them not barren, but more fruitful in the future, and we shall find that our weapon of logic may be applied, with benefit, to almost every particular in the design, from the largest to the smallest, from the plan to the least fitting. The result will be that when we look at a work of architecture we shall be struck by its truth, its development from the requirements will be perfectly clear and satisfactory, and it will meet them in the most common-sense and direct way. The building will show the principle of its construction, or if this is veiled it will be frankly veiled by a covering which in no way falsifies the true construction; every member of the composition will be plainly accounted for and have good reason for being there; the form of each will be governed by its construction, position, material, and the work it has to do. There will be no unnecessary or superfluous architectural features; no false character imparted to it by any tricks or shams; its use of materials will be perfectly honest and satisfactory to the eye and reason, and not contrary to the nature of the substance, and will not attempt apparent impossibilities. There will be no undue waste of material, the amount of this being

governed by the work to be done, by the nature and strength of the material itself, and the principles of good proportion. The ornament will be no more than is required by the class of work; it will have the appearance of being called for by the surroundings, and necessary to the effect; it will never overbalance the architectural lines, or appear a superfluous addition; it will reveal the nature of the material in which it is executed, and be suitable in form to it. The whole building will express the purpose for which it is built, and possess the character requisite to such purpose.

These points may be regarded as the foundations of good logical building. Judging from past achievements and methods, along these lines lies advancement. To judge from outward results, much work seems to have been done without consideration of these points or their application. But a properly trained architect should be able to apply these principles almost unconsciously, and be incapable of running counter to their directions.

It is therefore an important point in the training of an architect that he should be taught to view architecture from the standpoint of logical building. How this is to be done is open to question; but in addition to the customary training, one very good exercise is the analysing of any building, and the working out of the whys and wherefores of its various points. Untold good would come from this, and the student would be taught to see aright, which is one great necessity towards the successful practice of architecture.

It is of the utmost importance that an architect should be able to look at architecture in the right way, not merely as pretty building, but as the result of an intellectual effort on the part of the designer—things being there not because carving or decoration might be asked for, but because these things were necessary to the logical ex-

pression of purpose, and because they supplied a link in the chain of the design.

This training of men to see architecture properly, and to grasp the logical reasons existing for the design of a building, is often sadly neglected in early days, being put off till there is no time from press of business to enter upon such elaborate dissection of one's own work. Still, there is no place like a building in progress on which to learn the art of logical building, and the architect should be there as often as possible.

We stand at the commencement of a new century: with what ideas are we about to enter upon the unrolling of its years? The century which has gone from us has explored every diversity of building method, which, until its beginning, it had taken the whole history of mankind to produce. The net result is that great knowledge has been acquired and experience gained. Architecture has been raised to a high place again; people are more observant of it, and more critical, and look for more character in our work. But what is that character to be? Are architects alone of all the brain thinkers and heart workers who press through the gates of the twentieth century, with eagerness to grasp what is in store for them, to find naught save a resuscitated corpse which moves in death-like fashion to fulfil the functions required of it to-day? Or are they to find that architecture once again possesses a vital principle which renders it the joyful mother of all the arts and a source of inspiration to the beholder? By this it once more becomes great—a teaching power, an efficient historian, a lever for good, and a mirror of Eternal Verities. These are its aims, these are its functions, but they can only be realised when architects and the public place this in a foremost position among their views of architecture—that it is supremely logical building.

